MAYOR AND COUNCIL WORKSESSION

NO. 3 DEPT.: Community Planning and Development Services / LegalDATE: October 20, 2004
CONTACT: Deane Mellander, Planner III

SUBJECT FOR DISCUSSION: Zoning Ordinance Comprehensive Revision

ORDER OF DISCUSSION: Discuss the scope of the project and range of issues to be examined:

1. Main Purpose
2. Types of Revisions
3. Public Process
4. Next Steps

GENERAL DIRECTION SOUGHT AND SPECIFIC QUESTIONS TO BE ANSWERED: The City's Zoning Ordinance, Chapter 25 of the City Code, was last updated comprehensively in 1975. Prior to that, the last comprehensive revision was in 1956. In the last 30 years, zoning and desirable development patterns have changed substantially. New concepts such as floating zones, performance zoning, form-based zoning, and the New Urbanism have reshaped the field. The City's Zoning Ordinance needs to be thoroughly reviewed and up-dated to reflect 21st Century concepts appropriate to a City that is transitioning from "greenfield" development to redevelopments. Direction is sought on the review processes to be followed for the various revision categories. Staff also requests that the Mayor and Council and Planning Commission identify other zoning-related issues not already noted.

MAIN PURPOSE:

The comprehensive update is intended to accomplish the following goals:

1. **Make the code user-friendly**–Some of the language in the current code dates back to the City's first zoning ordinance in 1931. Even with subsequent updates, much of the language is written in the stilted "legalese" that was common at the time. To the extent possible, clear, concise modern English should be applied wherever possible. Some existing definitions reflect archaic terminology, as do some of the land uses defined in the table. The intended outcome is a code that is easily understood by the general public, while being legally sufficient to withstand legal challenge Revisions to the processes are also needed to make it more consistent and easier to use.

2. **Modernize the zoning concepts**–Currently, all of the City's zones are Euclidean*, which means that the zones define a rigid set of standards and requirements, with little flexibility. To achieve some of the desired flexibility, the City has developed several types of optional development procedures that overlay the base zones. This can be cumbersome, and occasionally confusing as to what development standards apply in such cases. As noted above, there are a number of new planning and zoning concepts that have been developed, and these need to be examined for potential application in the City. The City has matured, and is now in the posture of zoning for redevelopment of older sites, rather than dealing primarily with new "greenfield" development.

* "Euclidean" refers to the Supreme Court case, *Town of Euclid, Ohio v. Ambler Realty Co.*, that validated the concept of zoning in 1927.

3. Minimize impact on existing residential development–For the most part, the current zoning works well for the single-family residential neighborhoods. However, there needs to be an examination and fine-tuning of issues such as front porches, accessory buildings, fences, corner lot regulations, special exceptions, and over-size houses.

TYPES OF REVISIONS:

The staff has identified three levels of revisions:

1. Routine Updating: Staff-level issues (plain language changes, administration items, reformatting, cross-referencing, etc.).

2. Major Updating and Review: Issues requiring some degree of input, mostly from public bodies such as the Planning Commission and Board of Appeals. Changes to definitions, nonconformity issues, forest conservation, and landscaping and screening requirements fall into this category. An example would be the revision of the provision regarding encroachments allowed in the setbacks, for items such as bay windows, porches, fences, and retaining walls. These revisions will primarily be technical in nature without significant Citywide policy aspects.

3. Substantial Policy Issues: Issues that will require substantial background research and public input during the process, as well as participation by public bodies. These include changes to the intent of the zones, locations where uses are or are not appropriate, whether more special exception uses are needed, what form of zoning process is most appropriate (especially for nonresidential development, streamlining of review and approval procedures for special development procedures, development standards, modifications to the Town Center and Rockville Pike corridor areas, and updating the subdivision regulations. See Attachment 1 for a more detailed listing (circle 1). An example would be a determination as to the level of development intensity and building heights that will be allowed in the nonresidential zones.

The staff proposes to do the necessary research on addressing these issues and, where indicated, prepare an issues paper that will provide the background for the issues/amendments identified by the Mayor and Council and Planning Commission. A draft of a sample issues report on sidewalk standards is attached as an illustration.

Over the last several months there have been several text amendments identified by the Mayor and Council, Planning Commission and Board of Appeals. These amendments are listed in attachments 2 and 3 (circles 2 and 4). Attachment 3 includes comments from the Board of Appeals. Each item in attachment 2 has been classified as to which category (Major Updating or Substantial Policy) applies.

PUBLIC PROCESS:

Staff has been researching the field to find ordinances, programs and processes that will lend themselves to the City's needs. The ideas and proposals that come out of this research should be the subject of review and comment by the Planning Commission, Board of Appeals, and members of the public. Over the next two to four months, staff also will be working on the Routine Updating items. In addition, information from the Stonestreet Implementation Strategy will become available.

The process to gather public input prior to drafting the Substantial Policy issue section will be accomplished in several ways. First, the discussion from plans currently under development (i.e., Stonestreet, East Rockville, Lincoln Park, Rockville Pike, etc.) will be used as a foundation for broader, Citywide discussions. Second, current or recent discussions such as sidewalk width, optional method, etc. can be finalized. Third, using public forums or focus groups to discuss specific issues can be used. There will be a need for general public open houses to present issues, draft language, etc. over the next few months. Staff also anticipates working with civic associations, the Chamber of Commerce, REDI, and other interested organizations. Lastly, there will be the formal public hearing process for people to provide input.

In regard to the substantial policy issues, staff would request that the Mayor and Council and Planning Commission prioritize the issues listed in attachment 2 (circle 2). Some work has been done on these items and can be brought to the Mayor and Council for direction fairly quickly. The Mayor and Council should also identify which Substantial Policy Issues should go through a public forum/focus group process. Those forums/focus groups would occur early in 2005. The process described above is included on the Milestone sheet, which is currently being revised and will be distributed at the meeting. Over the next few months the Mayor and Council will be finalizing several issues that have already been discussed. At the same time staff will be working on the Routine Updating items. Staff will also be preparing for the public forums/focus groups for those Substantial Policy Issues identified by the Mayor and Council.

As portions of the new ordinance are drafted, it would be beneficial to have a group (or groups) to provide a more detailed and technical review as well as comment on the proposed language. The people involved should have some familiarity with the zoning and development process. At one end of the spectrum, the Mayor and Council could act as the reviewing body. At the other end would be an appointed committee with members of the public and development community. The staff suggests that a more focused group(s) of citizens, property owners, developers, etc. might be more efficient to review the actual ordinance language. Regular updates would be given to the Mayor and Council and Planning Commission at worksessions. After a complete draft ordinance is prepared copies would be distributed Citywide. It would also be presented and discussed at public meetings. Then the formal adoption process would begin. If the Mayor and Council concur with this process, staff will proceed. Additional outreach measures can be incorporated if the Mayor and Council so direct.

NEXT STEPS:

The staff asks that the Mayor and Council and Planning Commission identify any outstanding issues or processes that have not already been noted so they can be included in the work program. While research is under way on the larger issues, staff will be working on the Routine Updating work and the Substantial Policy Issues already started. Then in early spring the public forums/focus groups can be held. Also in the spring the specialized Task Forces can begin meeting to review the detailed ordinance language.

LIST OF ATTACHMENTS:

1. Zoning Program Overview Chart.
2. Current text amendments and suggested future amendments list.
3. Letter from Board of Appeals on recommended zoning revisions.
4. Zoning background information.
5. Sample draft Issues Report on sidewalk standards.

Zoning Program Overview

A. Code Sections That Require Routine Staff-Level Updating: Plain Language, Formatting, etc.

Art. 2: Administration:
- Planning Commission
- Board of Appeals
- Historic District Commission

Art. 3: Amendments:
- Annexations
- Local Map Amendments
- Sectional and Comprehensive Map Amendments

Art. 5: Permits:
- Use Permits
- Occupancy Permits
- Temporary Occupancy Permits
- Historic District Permits
- Occupancy Permits

Art. 11: Signs (Major revision completed in 2004; may need plain language and graphics updating)

B. Code Sections That Require Major Updating and Revision, and Review by Public Officials : Plain Language, Formatting, Revised Design Standards, etc.

Art. 1: In General:
- Definitions (Draft changes presented to Planning Commission in 2002; additional changes adopted in 2004 via Signs amendment): Add new definitions, revise/delete archaic terms, remove "regulation by definition", etc.
- Compliance Required
- Previous approvals, etc.

Art. 4: Nonconformities: Revise for clarity and consistency (Draft changes presented to Planning Commission in 2002)

Art. 10: Landscaping and Screening: Examine requirements for the setbacks and screening of the following:
- Parking Lots
- Storage Areas
- Mechanical Equipment
- Undergrounding of Utilities
- Include higher forest conservation standards

C. Code Sections That Require Substantial Policy Issue Research and Substantive Coordination with Officials and Public

Art. 6: Zoning Districts, Identification and Purposes: Terms, purposes and intent of zones.

Art. 7: Zoning Regulations:
- Uses Allowed: Add/delete/revise uses allowed; zones where allowed; permitted or special exception, etc.
- Development Standards: Revise consistent with revised standards and intent, especially for nonresidential zones
- Special Limitations

Art. 8: Special Exceptions:
- General and Specific Standards and Requirements: Parking, screening, neighborhood impact, etc.
- Types of Special Exceptions: Uses allowed; new SE's, etc.

Art. 9: Parking and Loading:
- Design Standards: Sizes of spaces; drive aisle widths; setbacks, etc.
- Number of Spaces Required by Use: Consider whether current requirements should be modified.
- Multiple Use Requirements: Parking district regulations; transit-oriented areas; Town Center, etc.

Art. 12: Special Development Procedures: Development consistent procedures; consider deletion of some items; amenity trade-offs, etc.
- Variable Lot Development
- Cluster Development
- Planned Residential Unit Development
- Townhouses
- Comprehensive Planned Developments
- I-3 Optional Method

Art. 13: Town Center Development: Master plan consistency; design guidelines; amenity trade-offs, etc.

Art. 14: Rockville Pike Development: Master plan consistency; design guidelines; amenity trade-offs, etc.

Art. 15: Subdivision Regulations: Revise and update

Note: All article are part of Chapter 25 (Zoning and Planning)

Rev. 10/18/04

Attachment 1

Text Amendment List – 10/20/04

Note: Letters at the end of each item refer to the categories in Attachment 1.

Current Text Amendments

1. Active text amendments in process:
   a. TXT2000-00186—Amendments to the requirements for screening or undergrounding of public utilities. **C**
   b. TXT2003-00202—Provision of Adequate Public Facilities for development and redevelopment. **C**
   c. TXT2004-00211—Allow nursing homes in CPD developments. **B**
   d. TXT2004-00213—Amendments to the optional method of development in the Twinbrook Metro Performance District. **C**
   e. TXT2004-00214—Delete requirement of finding of need for automobile filling stations, drive-thru restaurants and mechanical car wash as a special exception. **B**
   f. TXT2004-00215--Amend the Town Center zones **B**

2. Inactive text amendments:
   a. TXT2000-00187—Revise the home occupation provisions. **C**

Suggested Zoning Ordinance Amendments

1. Proposals already presented for review to the Planning Commission:
   a. Amendments to the Development Nonconformities and Nonconforming Uses provisions. **B**
   b. Suggested additions and revisions to the Definitions. **B**

2. Amendments Being Discussed:
   a. Amend optional method of development provisions to provide greater public benefit for granting additional development. **C**
   b. Amendments to implement the recommendations of the City-wide master plan. **C**
   c. Establish compatibility requirements for infill residential development. **C**
   d. Clarify residential accessory building regulations on corner lots. **C**
   e. Define "demolition", especially as it relates to historic structures. **B**
   f. Sidewalk widths. **C**
   g. Revise/strengthen Forest and Tree Preservation Ordinance. **C**
   h. Fences, porches, and other encroachments. **B**
   i. Accessory apartments. **C**
   j. Variances to comply with ADA. **B**
   k. Overlay zones. **C**

3. Other potential work program items:
   a. Consider floating zones. **C**
   b. Revise provisions for heliports and helistops. **C**
   c. Require MPDU's in elderly housing projects. **C**
   d. Revise the parking standards, especially as they relate to Town Center, Metro Performance districts, and other transit-oriented development. **C**
   e. Determine if proof of market is necessary for certain special exceptions. **B**
   f. Regulate impervious surfaces in certain zones. **B**
   g. Require minimum park area dedication in Special Development Procedures. **C**
   h. Consider overlay zones for certain special situations. **C**
   i. Add Bed & Breakfasts as a defined use. **B**
   j. Clarify effect of amendments on validity periods. **B**
   k. Administrative adjustments for minor variances. **B**

March 30, 2003

Hon. Susan Hoffmann
Councilmember and Liaison to the Board of Appeals
Mr. Arthur Chambers
Director of Community Planning ...
Rockville City Hall
111 Maryland Avenue
Rockville, Maryland 20850

Re: Zoning Ordinance Issues for Consideration by the Mayor and Council

Dear Councilmember Hoffmann and Mr. Chambers:

In deciding certain variance and special exception cases during the last few years, the Board of Appeals has wrestled with a number of issues that the City's zoning ordinances raise. Accordingly, in a project spearheaded by last year's Board chair, David Hill, the members of the Board have compiled these items for submission to the Mayor and Council for their consideration and action, in consultation with the City's planning staff. We submit these items now, understanding that a general review of the City's zoning ordinances is underway, as a follow-on to the recent Master Plan update. Each item is discussed in some depth in the memoranda that follow, prepared by various members of the Board. Briefly, the list, without any ordering of priority, includes six issues:

1. Economic need analysis for certain commercial special exceptions
   - A: Eliminate confining assessment of need to City residents
   - B: Eliminate economic need findings altogether
2. Fence heights in front yards of industrial zones
3. Porch set-backs and current residential planning ideas
4. Concept of accessory apartments; clarification of conditions for accessory apartments
5. Variances to accommodate handicapped individuals
6. Deck/porch encroachments in overlay or special zones

The Board is, of course, available to meet with the Council and/or staff to further discuss these items.

Sincerely,
Board of Appeals

Alan B. Sternstein, Chair
David Hill
Steven Johnson
Roy Deitchman

Cc: Robert Spalding, Chief of Planning
Peggy Metzger,
Castor Chasten

Zoning Basics

by Michael Chandler & Gregory Dale

Editor's Note: In the next few issues of the Planning Commissioners Journal we will be running several articles focusing on different aspects of zoning. As most new planning commissioners quickly learn, the local zoning code/ordinance – along with the municipal comprehensive plan – provides the framework for most local land use decisions.

In this issue, Planning Commissioners Journal columnists Mike Chandler and Greg Dale go over the basics of zoning. In our next issue, they will take a look at zoning and neighborhoods. As always, if you have a specific question about how your own community's zoning process operates, please consult with your planning director or legal counsel.

The Origins of Zoning in America

Regulation of buildings in America is as old as the founding of the country. President George Washington on October 17, 1791, for example, issued an order that only brick could be used within portions of what is now Washington, D.C. By 1822 an Act was adopted providing that within the then defined cities of Georgetown and Washington "no frame house intended to be occupied as a blacksmith's shop, factory, or livery stable, shall be erected within fifty feet of any stone or brick house" – not altogether different from the type of regulation found in a modern zoning code![1]

Early codes often, sensibly enough, focused on restricting use of combustible materials. But by the turn of the 19th century, local governments across the United States began to enact ordinances more broadly regulating where certain kinds of businesses could locate and the maximum height of buildings. Examples include an 1885 ordinance regulating the location of laundries in Modesto, California; ordinances regulating building heights in Washington, D.C. in 1899 and Boston in 1904; and a 1909 Los Angeles ordinance governing where industrial plants could be built.

ZONING REPRESENTS A DEMOCRATIC METHOD FOR SETTING THE GROUND RULES FOR HOW DEVELOPMENT CAN OCCUR WITHIN THE COMMUNITY.

These early ordinances were enacted, in part, to address the social and economic challenges associated with immigration and the rise of the industrial age across much of America. The ordinances sprang from the police power provision embedded in the Constitution which allows government to exercise reasonable controls in order to protect the public health, safety, convenience, and welfare.

With this foundation in place, New York City adopted the nation's first comprehensive zoning ordinance in 1916. The ordinance classified various types of land uses, delineated zones (through a zoning map) and established height and bulk standards for buildings. Other cities followed New York's lead and subsequently adopted zoning ordinances for the purpose of guiding and managing growth. *The Emergence of Zoning, p. 14*

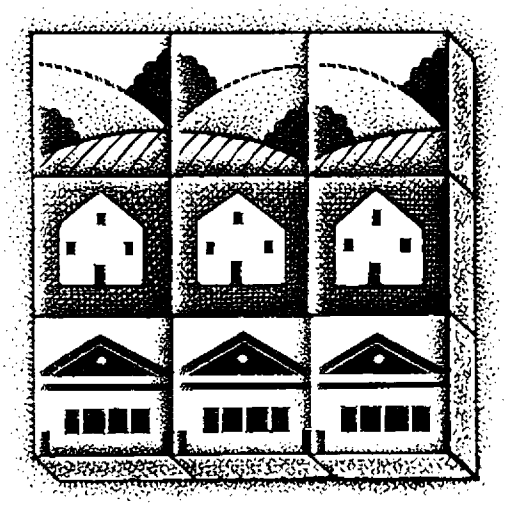
Zoning Enabled

In 1922, the U.S. Department of Commerce, under the leadership of then Secretary Herbert Hoover, published the Model Standard State Zoning Enabling Act. The Model Act – which was designed for adoption by states across the country – outlined the role and function of zoning, and set out uniform standards that localities could use to guide land development practices.

The national movement to adopt zoning got a big boost four years later (1926) when the United States Supreme Court ruled in *Euclid v. Ambler Realty* that zoning did not violate the due process clause of the federal constitution. The ruling resulted in the widespread adoption of zoning statutes across the nation. By 1940, zoning had become (and continues to be) the most common means of regulating local land use in the United States.

Zoning Defined

Zoning is a legislative process through which the local governing body (under power delegated it by the state zoning enabling law) divides the municipality into districts or zones, and adopts regulations concerning the use of land and the placement, spacing, and size of buildings. The primary goal of zoning is to avoid or minimize disruptive land use patterns involving incompatible land uses.



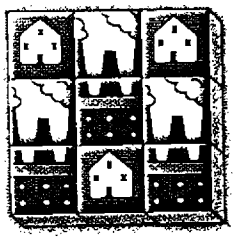
1 Our thanks to Lindsley Williams for informing us about Washington, D.C.'s early building regulations, described in Volume 52 of the Records of the Columbia Historical Society (1989)

The Emergence of Zoning

by Laurence C. Gerckens, AICP

American cities in the year 1900 were a hodgepodge of industrial, warehouse, commercial, and residential uses, frequently closely intermingled without rhyme or reason other than the characteristics generated by chance and individual advantage. It was not uncommon for a party to purchase a residential structure only to find it ringed by odoriferous uses that made occupancy of the structure untenable. Characteristics of entire neighborhoods often changed as uses moved in rapid succession.

The physical separation and isolation of dangerous, odoriferous, or unsightly practices, such as tar boiling, soap making, fat rendering, and dead carcass cremation, was viewed at that time as a reasonable governmental response to the unacceptable impositions of one otherwise legal activity upon another. Both the residences and these businesses had their right to exist, it was held, but not necessarily in close proximity to each other. Thus, the legal separation and isolation of land uses began, creating the foundations for many current zoning practices.



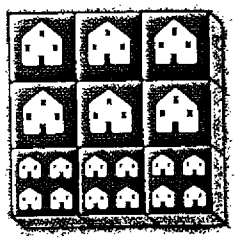
The New York Zoning Code of 1916, America's first "comprehensive" zoning code, relied on a "pyramidal" approach to permitted uses. That is, in the residence zone – considered the "highest" zone classification – nothing but residences were permitted. In the commercial zone, the next lower zone on the pyramid, commercial uses and residences were allowed. At the bottom of the pyramid were the industrial zones, where industrial and commercial and residential uses were all permitted. In effect, industrial zones were really unzoned for all uses.

In the 1920's a number of municipalities expanded on New York's single "residence" district by creating districts limited to development of single-family-detached homes only. The courts upheld these ordinances based on: (1) a public safety rationale (i.e., the risk of fire would be reduced because there would be fewer buildings, located farther apart, housing fewer families per acre); and (2) the premise that single-family-detached residence districts would induce good citizenship through the encouragement of home ownership.

The public safety rationale was constitutionally sound as it was founded on physical conditions capable of being proven to bear a direct relationship to public health and safety – preventing the extreme congestion commonly associated with the practices of apartment and tenement house construction of that era.

However, the second premise, that single-family districts would foster good citizenship by encouraging home ownership, was based on a faulty presumption. It presumed that single family-detached homes would be owner-occupied. But this was not a requirement of single-family-only zoning districts. Moreover, as time would prove, the courts would not look favorably on attempts by municipalities to specify conditions of occupancy (rental, ownership, lease, etc.) in their zoning codes.

Even more significantly, the presumption that single-family-only districts would be solely occupied by home owners has not been borne out. Indeed, in many communities entire neighborhoods of new single-family- detached units have been built and marketed as rental units.



Today, the condominium row house (or townhouse) often represents the principal home ownership option, particularly for young couples and single parents. Ironically, the same arguments made decades ago in favor of public laws promoting single-family-only districts to encourage home ownership could well be marshaled today in favor of promoting townhouse-density attached-unit zoning!

Laurence Gerckens is national historian for the AICP. The above is excerpted from his articles, "American Zoning & the Physical Isolation of Uses" (In PCJ #15), "Single-Family-Only Zones" (in PCJ #23), and "Ten Successes that Shaped the 20th Century American City" (in PCJ #38).

Zoning Basics...

continued from page 13

Since the establishment and modification of zoning ordinances is legislative in nature, zoning represents a democratic method for setting the ground rules for how development can occur within the community. Zoning is constrained, however, by the Constitution's "takings" clause which requires compensation when private property is taken for a public use. *[The impact of the "takings" clause is beyond the scope of this article; for a good overview, see "An Introduction to Takings Law" in PCJ #18 and available for downloading on plannersweb.com].*

Linking Zoning with Planning

Zoning depends on planning and planning depends on zoning. Neither can exist without the other. The comprehensive plan can be thought of as a roadmap which captures in pictures and words what a community wishes for itself. Although the plan will talk about land use, it does not regulate land use. This is the role of the zoning ordinance. In short, the comprehensive plan provides the public policy basis for drawing and applying the zoning districts which in turn control what happens on the land.

The subdivision ordinance is another planning tool that is closely linked with zoning. A subdivision ordinance regulates the division of land into building lots for the purpose of sale, development, or lease. The ordinance specifies procedures that are to be followed when land is divided and built upon. Standards governing the platting of building lots and planned improvements, such as roads and utilities, are common to most subdivision ordinances. When used in conjunction with the zoning ordinance and the comprehensive plan, the subdivision ordinance assures that the land development process is accomplished in an appropriate and consistent manner. *See "An Introduction to Subdivision Regulations," in PCJ #5 and 6.*

The Purposes of Zoning

It is important to bear in mind that local zoning authority is derived from

the state. Zoning enabling statutes set out – usually in quite general terms – what local governments can seek to accomplish through zoning. A typical state enabling law might include the following purposes:

1. Provide for adequate light, air, convenience of access, and safety from fire, flood, earthquakes, crime, and other dangers;

2. Reduce or prevent congestion in the public streets;

3. Facilitate the creation of a convenient, attractive, and harmonious community;

4. Facilitate the provision of adequate police and fire protection, transportation, water, sewerage, schools, parks, playgrounds, recreational facilities, and other public requirements;

5. Protect against the overcrowding of land and the undue density of population in relation to existing or available community facilities;

6. Encourage economic development activities that provide desirable employment and enlarge the tax base;

7. Provide for the preservation of agricultural, forested lands, and other lands significant to maintaining the natural environment;

8. Promote the creation and preservation of affordable housing;

9. Protect approach slopes and other safety areas of airports; and

10. Encourage the most appropriate use of land within the locality.

How Zoning Works

A zoning ordinance consists of two parts: a map (or series of maps) and text. The zoning map shows how the community is divided into different use districts or zones. Zoning districts common to most ordinances include residential, commercial, industrial, and agricultural. The zoning map must show precise boundaries for each district. Consequently, most zoning maps rely on street or property lines as district boundaries.

The zoning text serves two important functions. First, it explains the zoning rules that apply in each zoning district. These rules typically establish a list of land uses permitted in each district plus a series of specific standards governing lot size, building height, and required yard and setback provisions. Second, the text sets forth a series of procedures for administering and applying the zoning ordinance. In most cases, the text is divided according to "sections" (or "articles") for ease of reference. Most zoning

continued on page 16

Avoiding Spot Zoning

by Robert C. Widner, Esq.

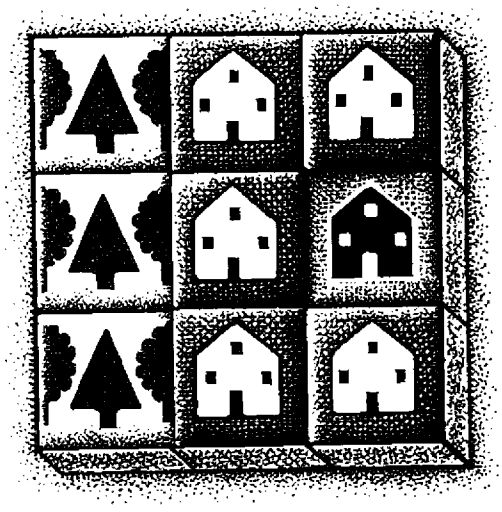
Most planning commissioners have heard the impassioned cry that a particular rezoning decision will constitute an invalid "spot zoning." This allegation typically arises where the community is considering the rezoning of a single lot or small parcel of property held by a single owner and the rezoning will permit land uses not available to the adjacent property.

Because spot zoning often focuses on the single parcel without considering the broader context, that is, the area and land uses surrounding the parcel, it is commonly considered the antithesis of planned zoning. While rezoning decisions that only affect a single parcel or small amount of land are most often the subject of spot zoning claims (as opposed to rezonings of larger areas), a locality can lawfully rezone a single parcel if its action is shown to be consistent with the community's land use policies.

Courts commonly note that the underlying question is whether the zoning decision advances the health, safety, and welfare of the community. A zoning decision that merely provides for individual benefit without a relationship to public benefit cannot be legally supported.

Although courts throughout the nation differ in their specific approaches when reviewing spot zoning claims, the majority consider:

1. the size of the parcel subject to rezoning;



2. zoning both prior to and after the local government's decision;

3. the existing zoning and use of the adjacent properties;

4. the benefits and detriments to the landowner, neighboring property owners, and the community resulting from the rezoning; and

5. the relationship between the zoning change and the local government's stated land use policies and objectives.

This last factor – the relationship of the rezoning decision to the community's land use policies and objectives – is perhaps the most important one. As a result, when a planning commission (or governing body) initially considers a rezoning request it should determine whether the request is consistent with the comprehensive or master plan.

Robert C. Widner is an attorney with the Denver, Colorado, law firm of Gorsuch Kirgis LLP. He also holds a master's degree in urban and regional planning. The above is excerpted from his article, "Understanding Spot Zoning," in PCJ #13

Zoning's "Achilles Heel"

by Susan G. Connelly, Esq.

Nonconforming uses and structures have been with us ever since zoning first emerged in the 1920's. Since that time, they have represented the "Achilles heel" of planning and zoning. The root of the problem is that nonconformities reduce the effectiveness of what a community is trying to accomplish through its comprehensive plan, as implemented by its local zoning regulations. The continued existence of nonconforming uses, for example, undermines what a community is seeking to achieve when it establishes specific allowable uses for a zoning district.

At the same time, communities – quite understandably – have been reluctant to call for the removal of ongoing businesses and existing structures, reflecting substantial financial investments, just because they fail to comply with current zoning requirements. The "solution" has been to subject nonconforming uses and structures to a diverse assortment of restrictions, all intended to hasten the day when the particular use or structure either "disappears" or comes into compliance with the existing zoning regulations.

The variety of nonconforming situations account for the difficulty in regulating them. Nonconforming uses in residential zoning districts can range from things such as tool sheds in small accessory buildings to bulk storage of gasoline or oil in large buildings suitable only for that specific use. Nonconforming uses can also involve uses in structures designed for conforming uses (such as a manufacturing operation occurring in an office building in a commercial zoning district) or uses in structures which may be adaptable to conforming uses (such as manufacturing in a factory building, in a multi-family residential district, which could be converted to apartments). Obviously, some of these uses are easier to eliminate than others.

As mentioned, zoning ordinances usually seek the eventual elimination of nonconforming uses and structures. This is primarily accomplished by: (1) limiting repair, restoration, additions, enlargements and alterations of the nonconforming structure or of the structure housing the nonconforming use; and (2) restricting or prohibiting the expansion or change of the nonconforming use itself.

Most ordinances specify that once a nonconforming use is discontinued, it may not be resumed. These "abandonment" provisions usually only apply when the discontinuance of the use is "voluntary" – as opposed to when the use is discontinued during bankruptcy or foreclosure procedures. The zoning ordinance will also usually specify a minimum time period before a use is considered to be voluntarily abandoned. In some states, courts will also require proof of an intent to abandon the use.

"Amortization" provisions – through which the local government requires that the nonconforming use or structure be eliminated within a specified number of years – have had mixed results when challenged in court. While the topic of amortizing nonconformities is a complex one, a basic rule of thumb is that amortization provisions are more likely to be upheld when they involve simpler uses or structures whose value can be readily amortized over a few years. Courts will closely examine the extent to which an amortization provision would cause financial hardship or loss to the property owner. Thus, a provision affecting a nonconforming commercial or industrial business facility is much less likely to be upheld than one eliminating a nonconforming advertising sign or fence.

Susan Connelly, AICP, is Vice President of Community Design for McStain Enterprises, Inc., a 35-year old "green" community developer and home builder based in Boulder, Colorado and is a member of the Boulder Urban Renewal Authority. Connelly practiced land use and real estate law in Illinois and Florida for 13 years. The above is excerpted from her article, "Non-Conforming Uses & Structures," in PCJ #2.

Zoning Basics...

continued from page 15

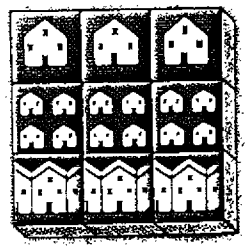
ordinances include the following:

1. *Title, Authority and Purpose.* This section identifies the specific state enabling provision which empowers the locality to adopt zoning. It also spells out, in a "statement of purposes," the community's reasons for adopting the ordinance. The statement of purposes links the rules and regulations listed in the ordinance to the community's values and goals.

2. *General Provisions.* Topics covered in this section usually include definitions of terms used in the ordinance, and a description of the geographic or jurisdictional reach of the zoning ordinance. Definitions are especially important because the general public, as well as the courts, must be able to attach specific meaning to the words and concepts appearing in the ordinance.

With respect to jurisdictional reach, zoning ordinances will typically apply to the territory contained within the political subdivision; meaning the city, county, town, township, or village. In some cases, however, a zoning ordinance may reach beyond a locality's political boundaries. Such "extraterritorial" zoning is permissible if it is authorized by the enabling statute.

3. *Zoning Districts and Regulations.* This section of the ordinance is arguably the most important since it lists and defines each zoning district – as we have noted, the concept of districts stands at the core of zoning. Most zoning ordinances will include – at a minimum – residential, commercial, and industrial districts. Residential districts, in turn, are often broken down further into zones for single-family and multi-family dwellings of varying density.



Similar distinctions, based on intensity of use, are also often found in business and industrial districts (e.g., light industry versus heavy industry).

Other common types of zoning districts are agricultural, conservation, and institutional. Many communities have also crafted a wide variety of "mixed use" districts, allowing blends of uses in some parts of the community.

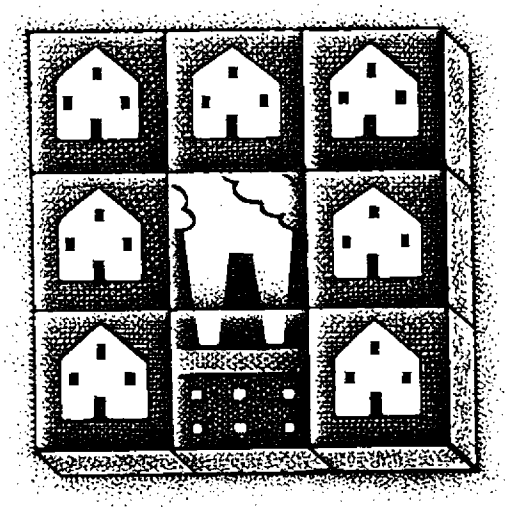
Many zoning ordinances include one or more special purpose zones addressing flood hazard areas, historic properties, and other specialized uses. These special zones are often applied as "overlays" – that is, those geographic areas subject to overlay zones are also within an "underlying" zoning district. For example, a property within a residential zone might also be located within a flood hazard zone. This property would be subject to the regulations of both the underlying zone (in this case, residential) and the overlay zone (flood hazard).

In addition to listing and defining zoning districts, this section of the zoning ordinance sets out rules for the use of land in each district. Most basic is the list of permitted versus special or conditional uses. If a use is deemed permitted (commonly referred to as a "by-right" or "matter-of-right" use), it need only meet the ordinance's dimensional requirements (as described below) and any other "impact standards" (such as parking, landscaping, and signage standards; see point 5 below) to secure a zoning permit.

Other uses may be allowed within a district provided they are granted a special or conditional use permit. The terms special exception, special use, and conditional use permit generally have the same meaning; what term you're familiar with depends on the state you live in. The zoning ordinance will set out the standards which must be met for granting such a permit. See *Special Permits*.

Finally, this section of the zoning ordinance includes, for each zoning district, basic development requirements. These primarily involve dimensional standards for setbacks and side yards, minimum lot sizes, and building heights.

4. *Nonconforming Uses, Structures, and Parcels.* When a zoning ordinance is



adopted some existing uses, structures, and parcels may not comply with the regulations of the zoning district in which they are located. These uses, structures, or parcels are then classified as "nonconforming." While they are typically permitted to continue, their future expansion, reconstruction, or conversion is regulated by provisions set out in this section of the zoning ordinance. See *Zoning's "Achilles Heel," p. 16*

5. *Impact Regulations.* Many zoning ordinances include a separate section (or sections) setting out a variety of "impact" regulations or standards. These might include, for example, parking standards, sign regulations, landscape requirements, urban design criteria, historic preservation standards, and various environmental criteria (such as requirements for tree plantings in new developments).

6. *Administration and Enforcement.* This section of the zoning ordinance spells out the duties of those involved in administering the ordinance – the zoning administrator, the governing body, the planning commission, and the board of zoning appeals or board of adjustment. Procedures to be followed when amending the zoning ordinance, as well as standards for assessing penalties and fines for zoning violators, are also included in this section.

Who's Who in Zoning

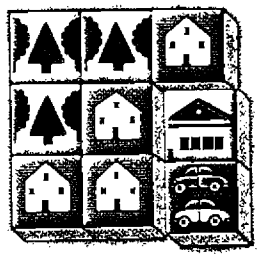
In order to make sense out of the zoning process, it is important to understand the players and their respective

continued on page 18

Special Permits

by Neil Lindberg, Esq.

Special permits are approvals given to uses that meet certain standards or conditions which are listed in the local zoning ordinance. The conditions are often designed to ensure that the use will not adversely affect nearby existing uses. Special permits are commonly employed to protect residential neighborhoods against potentially disruptive uses – uses which might generate substantial amounts of noise, odor, or traffic, or which might in some other way be incompatible with the neighborhood. For this reason, uses such as gas stations and convenience stores often require special permits.



Local governments are also increasingly coming to require special permits for major development proposals. This allows the local government, typically through its zoning board, increased flexibility in examining the impacts of large-scale uses, and the ability to impose conditions to lessen adverse impacts. Projects such as shopping centers or office parks are particularly likely to require special permits.

Zoning ordinances must specify the standards by which the special permit application is to be reviewed. Some standards are narrow and fairly objective. For example, the special permit use might be required to maintain a minimum of 35 percent open space.

Standards that are too general are susceptible to challenge in court on the ground that they allow for arbitrary government action, violating individual due process rights. However, courts are becoming more liberal in reviewing special permit standards. There is much variation, nevertheless, and standards upheld in one community might well be struck down in another.

Neil A. Lindberg is an attorney and city planner. He is counsel to the Provo, Utah, Municipal Council and maintains a private practice focusing on planning, zoning, and land use law matters. The above is excerpted from his article "Special Permits," in PCJ #3.

Watch Out For...

by Greg Dale

1. *When the legislative body is the final decision-maker on everything.* Many elected officials believe that they should have the final say on everything. Their theory is that they were elected and therefore the buck should stop with them. So, for example, many local governing bodies – in addition to acting on zoning ordinance changes – will hear appeals from decisions of the board of zoning appeals; act on conditional use permits and related decisions; and act on site plans.

However, problems can arise. First, when governing bodies act as appeals boards, they often do not perform this function very well. Frequently testimony that was taken by the zoning board of appeals (or planning commission) is reopened, and the matter becomes politicized. Most governing bodies simply are not well suited to act as quasi-judicial decision-makers. Since legislators most often function in an environment where all forms and channels of communication are anticipated, they are also at greater risk of either initiating or being drawn into inappropriate ex-parte communications. Finally, when local governing bodies are involved in administering regulations, they tend to lose sight of the larger policy issues.

2. *When the planning commission acts in a quasi-judicial role.* Planning commissioners should understand the difference between acting in an advisory capacity and in a quasi-judicial capacity. When the planning commission is making a recommendation to the legislative body on a zone change, for example, it is acting in an advisory capacity. However, in many communities the planning commission is also the final decision-maker on certain matters, such as subdivision plat, site plan, and conditional use/special permit approvals.

When acting in this quasi-judicial capacity, fact finding, evidence, and written findings become particularly important. In addition, certain ethical constraints – such as the avoidance of "ex-parte" contacts – come into play.

"Legislative" v. "Quasi-Judicial" Actions, p.19

3. *When planning commissions get caught up in minutiae.* Many planning commissions spend hours going through excruciating details on development proposals, dealing with items over which they have little discretion (at least if they follow the dictates of the zoning code). Particularly in communities with professional staff, there is no need for the planning commission to take on what is essentially a staff responsibility. A planning commission works best when it allows staff to make technical determinations, while focusing its attention on those matters which require discretionary decision making. Of course, this assumes the community has a good zoning code, with well-articulated standards, in place.

4. *When elected officials try to influence the planning commission recommendations.* It is all too common to find elected officials attending planning commission meetings and trying to influence the commission's recommendations. This is perplexing, since one of the principal reasons for planning commission consideration of zoning amendments is to provide the elected officials with their best advice. It is counterproductive for elected officials to try to influence the "independent" advice that the planning commission is supposed to provide them.

5. *When zoning boards grant too many variances.* The consideration of variances is one of the most difficult jobs of a zoning board of appeals. Variances are an important "safety valve" in zoning, but are also often abused. Variances are intended to apply only in unusual circumstances where a literal interpretation of the zoning code creates a hardship, and then only pursuant to standards set out in the code.

The difficulty lies in how "hardship" is interpreted and how facts are considered relative to standards. A zoning board needs to clearly understand what must be proven before a variance can be granted. If the vast majority of variance requests are being granted, it is likely that either the zoning board is not requiring the level of proof required by the zoning regulations, or that the regulations need to be amended.

Zoning Basics...

continued from page 17

roles – and the types of decisions they are responsible for making.

The zoning process is similar to the balance of power that we all learned about in Civics class. In zoning, different bodies have different responsibilities that serve as a system of "checks and balances." For the system to work efficiently each role must be played well by the respective body responsible for that role; conversely, it is important for individual bodies to not exceed their designated role.

There are four main types of decision-making functions in the zoning process: *legislative, advisory, administrative,* and *quasi-judicial.*

1. Legislative

The legislative function involves the adoption or amendment of the zoning regulations themselves. The local governing body is comprised of the elected officials in your jurisdiction. This may consist of a city council, county board or commission, village council, township trustees, and so forth. Note that the zoning map is considered to be part of the zoning regulations, which means that a zoning map amendment or "zone change" is a legislative act. In the vast majority of states only the governing body can approve either text or map amendments.

2. Advisory

Before adopting or amending the zoning text or map, the local zoning process will typically call for the planning commission to provide advice on the wisdom of any such adoption or revision. The commission will examine whether the zoning proposal is consistent with the goals and policies of the locality's adopted comprehensive plan. *Avoiding Spot Zoning, p. 15.* Many planning commissions are also involved in drafting proposed zoning ordinances and amendments.

In any zoning adoption or amendment process the local governing body is likely to hear from a variety of "special interests" ranging from local

homeowners and neighbors to builders and developers. These groups are a natural and important part of the process; however, it is equally important to have the independent voice of a planning commission that is focused on the long range public interest of the community as a whole.

3. Administrative

It is sometimes surprising for new planning commissioners to learn that the majority of decisions made in the zoning process are actually made at the administrative level by staff planners, zoning officers, or other municipal employees.

Non-discretionary standards such as lot size, lot width, setbacks, building height, permitted uses, sign height and size, and parking lot standards, can be administered by staff without the need for review by planning commissions or legislative bodies. These decisions often take the form of zoning certificates and certificates of occupancy, and are frequently made as part of the building permit process.

4. Quasi-judicial

No zoning code is perfect, nor can all potential circumstances be anticipated. For that reason, several "safety valves" are built into the zoning process. First, there are occasions when an interested party may simply disagree with the way in which the administrative staff has interpreted the zoning regulations. Second, there are instances where the strict application of zoning regulations creates an unfair situation to a property owner.

Typically, as part of the zoning process, a board is designated to hear appeals and consider variance requests. This board is usually referred to as either the "board of zoning appeals," "board of adjustment," or some similar title. It generally acts in a "quasi-judicial" capacity because in most states and communities its decision is final (subject only to appeal in the local court system). This means that zoning board decisions must be based on specific factual evidence, and include written findings of fact to support the decision.

Planning commissions in many states sometimes also act in a "quasi-judicial" capacity. *For more on this, see point 2 in the "Watch Out For" sidebar p. 18.*

Summing Up:

Treatises have been written on zoning. In fact, your planning department or municipal attorney's office may well have one or more of them. Given the constraints of time and space, we have necessarily focused on some of the more basic aspects of zoning (and despite state to state differences, zoning is remarkably similar nationwide). By at least having an understanding of the basics of zoning – and of who's who in the zoning universe – you should have a better feel for your job as a planning commissioner or zoning board member. In the next issue of the *Planning Commissioners Journal*, we'll take a closer look at a constellation of issues related to "zoning and neighborhoods." ◆

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Editor's Note: If there are any zoning topics you would like to see addressed in future issues of the *Planning Commissioners Journal* please call or e-mail us at: 1-888-475-3328 or pcj@together.net

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Editor's Note:

Legislative v. Quasi-Judicial Actions

The distinction between the "legislative" and "quasi-judicial" role of a planning commission is one many new planning commissioners are not familiar with. It can be an important distinction, however, because when a commission is acting in a "quasi-judicial" capacity, it typically must follow a range of procedural and ethical standards designed to ensure that property rights are respected. This is mandated by the Constitution's due process clause.

Attorney Gary Powell provided a concise explanation of the two different roles in Issue #2 of the *PCJ*:

"A planning commissioner takes a 'quasi-judicial' role when engaged in determining the rights, duties, privileges, or benefits that relate to a specific property or property owner. This happens, for example, when a planning commissioner is called on to review a conditional use request for a specific parcel, or a subdivision plat. In contrast, the other role planning commissioners often assume involves dealing with 'legislative' type activities. This role is taken when a planning commissioner is engaged in recommending standards that have a general and uniform operation, and which are ultimately decided by the local legislative body. For example, when the planning commission is working on a proposed zoning ordinance that will go to the legislative body for final approval, the planning commissioner is engaging in what is considered to be legislative type [or advisory] activity."

A more thorough discussion of procedural safeguards (such as adequate notice, the opportunity to be heard and present evidence, and written decisions supported by reasons and findings of fact) needed when a planning commission is acting in a quasi-judicial capacity can be found in Dwight Merriam and Robert Sitkowski's article, "Procedural Due Process in Practice," in *PCJ* #33. For a review of the various ethical issues facing planning commissions in their decision making, see Greg Dale's collected ethics columns in "Taking A Close Look: Ethics" available from the *Planning Commissioners Journal*

ZONING News

MAY 1999

AMERICAN PLANNING ASSOCIATION

APA

So You're Gonna Revise the Zoning Ordinance! Part One

By Leslie S. Pollock, AICP

When the mayor and city council announce it is time to revise the zoning ordinance, they unleash a process that will involve consideration of issues that at first blush, appear totally unrelated to zoning. Persons who believe they are well versed in the zoning ordinance will invariably discover that some assumptions or premises about the ordinance are not true and that the unintended consequences of certain zoning requirements are legion. Even the zoning administrator—typically the person most knowledgeable about the intricacies of the ordinance—can always find something new and disquieting, as little-used provisions are examined, dissected, and discussed.

> Zoning does much more than "regulate land use." The detailed policies and standards contained in the ordinance effectively structure the community's policy in many other areas, including urban design, housing, environmental quality, property value, traffic, and transportation.

This issue of *Zoning News* explores issues related to who is in charge of revising the ordinance, assessing the state of the present ordinance, and determining the necessary changes. Next month's issue moves readers through the process of a zoning redraft, including current approaches and techniques for the ordinance outline and organization, administrative provisions, district structure, development standards, definitions, and reviewing and adoption.

The scope and implications of the revision are rather significant, given that zoning does much more than "regulate land use." The detailed policies and standards contained in the ordinance effectively structure the community's policy in many other areas, including urban design, housing, environmental quality, property value, traffic, and transportation. Moreover, it does this in a degree of detail that makes the policies of the comprehensive plan resemble community design as if done with a blunt instrument. The zoning revision usually comes after a comprehensive plan update, and it is often during that update that community leaders working to secure support of the plan point out that the policies in the plan are flexible. The zoning ordinance is just the opposite, with many of its policies inflexible and many of its standards unbending. Moreover, while a substantial number of these standards have been codified and sanctified by years of use, community leaders are not always sure of the origins, reasons, utility, and impacts of certain development standards in the ordinance.

The ordinance rewrite generates new constituencies. Groups appear that favor the existing development patterns and believe that the status quo ought to be preserved, telling city officials that the strength of the present ordinance has made such development patterns. Other groups come forward asking for modifications to serve the needs of one constituency or the other. Some constituencies ask for more controls while others ask for fewer.

The Zoning Revision Process

How does one balance these conflicts? How does one determine what standards to keep and what standards to change? How does the community make the ordinance more flexible yet still predictable—as is often the cry—and continue protecting the ever-present issue of local property values? Every community approaches an ordinance revision in a manner best suited to the issues faced by the community, the politics of the moment, and the resources available. Some communities jump head-first into the process. Most, however, think the zoning revision process through and decide that they would be best served by a basic five-step process:

- Put someone in charge.
- Identify what is wrong with the ordinance.
- Agree upon the scope of changes necessary.
- Redraft the ordinance.
- Review and adopt the ordinance.

The strength of this process is that it can involve people who are interested or concerned, it approaches the ordinance revision in a sequential manner and builds consensus on proposed changes, and it keeps the process focused.

Who Is in Charge?

Zoning is a key municipal function, and it is obvious that the mayor and city council will be in charge of an ordinance revision. But who will shepherd the revision on its way to final approval? First, the city council may want to retain control and actively participate in all facets of the process. Alternative candidates for this role are the plan commission, zoning board of appeals, or zoning commission. State statutes may also give guidance in this decision, as may local tradition.

If the community is open to considering options, several observations might be useful. First, the zoning revision is essentially a policy process, and the group charged with the revision should have a policy orientation. Second, such a revision cuts across many areas of expertise, including law, planning, architecture and urban design, real estate, and construction, amounting to more than an adjustment of regulatory provisions. Third, a revision will involve various

constituencies with different issues and concerns. The process might become controversial, so the group should be skilled and comfortable leading an open public process. Probably the most appropriate groups, given these observations, are the plan or zoning commissions constituted especially for this purpose.

The assignment of staff to the revision group is critical. The process is too demanding and too important to be assigned to an individual who is overloaded with other duties. Persons working in the zoning revision should have available adequate planning or zoning department personnel to carry out the necessary research and conduct additional meetings. Even if the city decides to use a consultant in the revision process, provision for adequate and knowledgeable support staff who know the ordinance is essential.

> Broad-based public input is difficult at the early stages of zoning revision. People find zoning an easy issue to talk about when it impacts individual property or a single neighborhood, but its often complex structure and detail make it a topic that does not hold a high degree of interest.

What Is Wrong with Our Present Ordinance?

You cannot fix the zoning ordinance unless you agree on what is broken. Therefore, a careful and complete listing of problems and issues is an important task. This list is best developed through a program of community input that reaches out to the key members of the "zoning constituencies," including city staff; the plan commission and zoning board of appeals; the city council; the real estate community, including sales, construction, design, and finance; and the activist community, including representatives from homeowners associations, civic betterment leagues, and community-based organizations.

Broad-based public input is difficult at the early stages of zoning revision. People find zoning an easy issue to talk about when it impacts individual property or a single neighborhood, but its often complex structure and detail make it a topic that does not hold a high degree of interest. Therefore, it is best to structure working groups of representatives from the constituencies listed above to keep a routine check on issues from various perspectives. Obviously, it is important to keep the community informed through the media and community outreach mechanisms, but a zoning update is much different from a comprehensive plan update, and in its initial stages usually fails to attract broad-based participation.

Leslie S. Pollock is a principal consultant of Camiros Ltd., a planning and zoning consulting firm with offices in Chicago, Denver, and Indianapolis. He has prepared numerous zoning ordinance revisions for communities across the country and is currently assisting Clark County (Las Vegas), Nevada, with the preparation of a new Unified Development Code.

Three key issue-based analyses should be performed to complement the issues addressed by the constituencies, including a review of the relationship of the comprehensive plan to the zoning ordinance, a technical review of the structure and consistency of the zoning ordinance in light of current best practices, and an analysis of zoning change actions over the past five years to gain a sense of key problems. Such analyses should look at the pattern of variations, text, and map amendments.

Among the typical scope of issues to be addressed or investigated are:

- *The utility of the current ordinance organization.* Does the ordinance clearly specify who is responsible for various application reviews and approvals? Is that responsibility assigned to the most appropriate board, commission, or staff position?
- *The relationship of district structure to the comprehensive plan.* Do the purposes and standards of each zoning district relate to applicable policies of the comprehensive plan?
- *The adequacy of current administrative structure.* Can applicants easily identify who to see or what to apply for when they have a zoning problem or need? Do the reviews and approvals happen in a timely manner?
- *The utility of current development standards.* Are current parking, landscape, environmental, and similar requirements easily applied, and do they have the desired results?
- *The currency and/or lack of definitions.* Are terms defined in a contemporary manner, and are all major terms used in the ordinance clearly defined?
- *The scope of ordinance interpretations.* Does the ordinance clearly specify district requirements and the related approval process, or does the applicant often depend upon staff interpretation of such requirements?
- *The relationship of zoning bulk standards to the development being constructed.* Do the height and yard regulations encourage or discourage a desired type of development? Does it result in buildings of desirable scale and design?

This material should be prepared and summarized in a form that can be presented to key decision makers, the zoning board, plan commission, or city council for review and confirmation, as well as made available to the participating public. This list essentially represents the first summary statement of the problems or conditions that need to be resolved or addressed through any zoning ordinance revision, and can help to focus the community and the group charged with the zoning revision on the scope of changes to be addressed.

What Changes Are Necessary?

The value of such a list is that it can be used to determine the changes that should be made to the zoning ordinance through the revision process. The scope of these changes can be thought of as proposed zoning policy. Comprehensive planning is often thought of as a policy exercise and zoning is often viewed of as a regulatory exercise. Yet, there is as much or more policy development inherent in the zoning process as within the comprehensive planning process. The need for policy at the zoning level may not be evident at first. However, if zoning is a book of rules, then why are such rules set, and by whom? Zoning is not a general regulatory measure, but a highly specific

approach toward addressing such details as placement of buildings; specifying the type of land uses that can be located on specific sites; and addressing a myriad of small but significant requirements for parking spaces, sign location and design, and tolerable noise, vibration, and dust levels through site uses. The guidelines and policies required to provide such direction are extensive, and their development is very demanding.

While many of the detailed standards, such as those for parking, should result from national best practice research, it is clear that some of the more particular community-based rules must emerge through local policy. This includes rules pertaining to administration, district and land-use structure, and development standards. For example, current revision activities tend to consider the following administrative questions:

- How do we streamline the development review process?
- Should we utilize hearing officers?
- What are the hearing and decision responsibilities of the zoning board of appeals, plan commission, and city council?
- Should the community move to site plan review or even further into design review as part of the zoning approval process?

Zoning use and bulk policy questions are often quite specific and related to development problems raised within the community. For example, one of the key questions asked in many communities is how to adjust the zoning ordinance to address the "teardown" and "mega-house" development trends occurring in established neighborhoods around the country. Other questions might include:

- Are the present commercial districts encouraging or discouraging the desired urban design character?
- Are more districts needed to carry out the plan policies and reflect community desires for specific control in one area and more flexibility in another?

Depending on the answers to these and similar questions, it will be clear whether changes in district structure are needed. Policies need to be established to guide the drafting of new districts.

Development standards always need attention in the revision process. Do the present standards require too much or too little parking? Do the community's urban design concerns suggest a need for additional or modified landscape and site design standards? Does the community need to be more flexible in accommodating accessory uses such as home occupations and day care? Are the environmental standards, addressing noise, lighting, vibration, odor, and dust useful and applied properly?

Much of the research into these standards or policies may be directed toward best practices. However, best practices vary depending upon how aggressive the community wants to be in implementation and measurement, and how restrictive it wants to be regarding on-site development. Answers to these and similar questions go to the heart of regulatory control.

In many respects, it is better to agree early on the scope of the changes to the ordinance rather than debate the proposed changes when the ordinance is completed. To that end, it is useful to suggest policy alternatives for resolving the key issues identified early in this stage to encourage debate and discussion by the groups that raised the issues. It is also important to secure adoption of these policy decisions by the entity responsible for the revision prior to undertaking the redraft. The adopted policies list resulting from this discussion becomes not only the guide to ordinance drafting, but the key tool in supporting the revised zoning ordinance during the hearing and adoption process.

Zoning News Briefs

Lake Tahoe Preservation Case

The Tahoe Sierra Preservation Council (TSPC) is claiming partial victory in a lawsuit against the Tahoe Regional Planning Agency (TRPA). The lawsuit, filed in 1984 by approximately 449 people who own property in the Lake Tahoe area, alleged that the planning agency's zoning regulations had taken away all viable economic use of their property.

Daniel Brody

The water clarity of Lake Tahoe has been decreasing since the early 1950s because of increased development and more impervious surface coverage. Stormwater runoff and high algae growth in the lake (a consequence of development) is causing the lake's color to change from clear blue to "opaque green."

In 1980, an amendment in the Tahoe Regional Planning Compact required the agency to protect Lake Tahoe and its environment by developing a new regional plan and environmental threshold carrying capacities. Following that decision, TRPA passed strict land-use regulations, eventually issuing a moratorium on all new construction in the area. The moratorium was in effect until a new regional plan was adopted.

The regional plan, adopted in 1984, classified land into "land capability districts" based on how prone the lake was to environmental damage. Vacant land was placed into districts ranging from one (the least suitable for development) to seven (the most suitable). Virtually no development was allowed in districts below three because of the high risk of erosion in these areas. Development in stream environment zones, which are areas that act as filters for stormwater runoff, was restricted.

In the recent U.S. District Court ruling, Judge Ed Reed found that a taking had occurred during the moratorium of 1981, but stopped when the regional plan was adopted in 1984. The next step is to go back to court to determine how much compensation each property owner will receive. Mary Gilkanfarr, executive director of TSPC, says: "It will probably come out in the range of [a total of] $20 to $50 million." John Marshall, council for TRPA, has already begun to appeal the decision. The Planning Advisory Service can provide PAS subscribers with the U.S. District Court decision.

Becki Retzlaff

ZONING News

JUNE 1999

AMERICAN PLANNING ASSOCIATION

APA

So You're Gonna Revise the Zoning Ordinance! Part Two

By Leslie S. Pollock, AICP

Part one of this two-part series identified issues to be considered during the preliminary stages of an ordinance revision, including community approved policies that guide the structure of the new or revised ordinance. Now, it is time to begin the drafting process. This issue of *Zoning News* explores current approaches and techniques for the ordinance outline and organization, administrative provisions, district structure, development standards, definitions, and reviewing and adopting the ordinance. Give this process plenty of time and approach the drafting step incrementally. Do not expect to get it right the first time.

Three drafts will probably be necessary during the revision process. The first draft is for internal review, as certain details may be missed and some policy changes could have unintended implications. Also, administrators can evaluate whether proposed changes meet specified goals or follow specified policies. The second draft typically circulates within the community for review and discussion. Unanticipated problems and issues emerging from the discussion of that draft can then be rectified and reflected in the public hearing draft, which is presumed to be complete and fully responsive in all aspects of its development.

Outline and Organization

Most zoning ordinances evolve through amendment. This process can lead to organization problems, which result in regulations that are hard to find or follow and a document that is difficult to use.

At this stage, it is important to determine the desired ordinance. An appropriate alternative to the ordinance as a free-standing document is to include all land-related regulatory controls in the form of a unified development ordinance that integrates subdivision, zoning, improvement standards, development review, and other related components of the city's development regulations into a single document.

The choice of maintaining a zoning ordinance as a single document or as part of a unified development ordinance depends both upon local tradition and a desire for administrative efficiency and effectiveness. Such a decision could complicate the process, increase the scope of issue identification and policy development, and affect the organization of the document. Generally, it appears that unified development ordinances are better suited for communities experiencing major growth.

Drafting the ordinance may begin after an agreement has been reached as to its outline and organization. Depending upon the complexity of the intended ordinance, the extent of the changes, and the character of the community, redrafting the document could be done prior to any review procedures.

Another option is to redraft and review the ordinance element by element.

Because of an interrelationship between sections of the ordinance, the administrative provisions may directly affect the interpretation of certain requirements. It is often most desirable to redraft the entire ordinance before subjecting it to community review. This is easier if the scope of the ordinance revision is modest, the ordinance is devoid of complexity, and the revision is not a technically or politically contentious issue.

For complex redrafts, any work should be done on a component or modular basis. Such is also the case when different constituencies are interested in different portions of the ordinance. Regardless of the approach, the redrafting process should include administrative provisions, community districts, design and development standards, and definitions.

Administrative Provisions

Administrative provisions typically cover three broad topic areas, including roles and responsibilities of the various boards, commissions, or individuals charged with administering portions of the ordinance; procedures used to evaluate and act upon the different reviews and approvals contained within the ordinance; and procedures and penalties related to enforcement of the ordinance provisions. The procedures should clearly describe the administration process, maintain due process, and facilitate efficiency of operation and consistency of application.

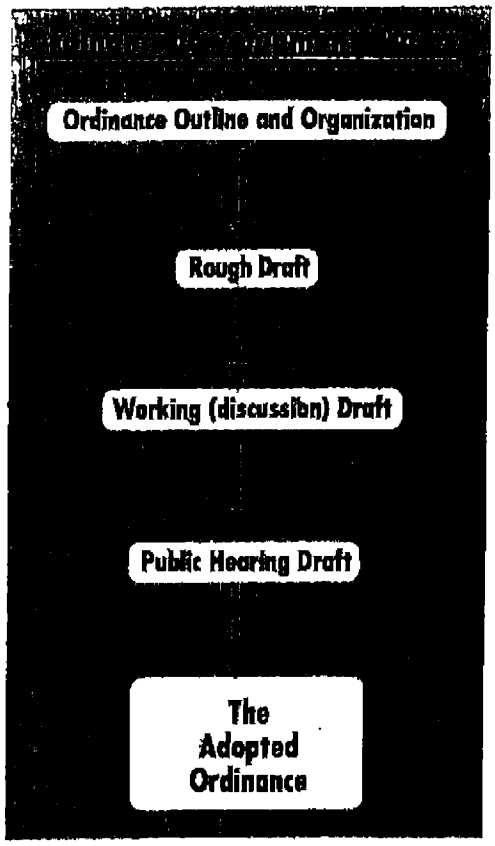
> The redrafting process should include administrative provisions, community districts, design and development standards, and definitions.

Districts

The district section of the zoning ordinance is often viewed as the centerpiece, as the district structure tends to implement the land-use policies of the comprehensive plan. Thus, the number, purpose, and content of each district ought to be drafted with consideration of those policies and the distribution of the existing and proposed land-use patterns as indicated in the comprehensive plan land-use map. Typical zoning district sections contain a purpose statement, use regulations, bulk regulations, and site development standards.

Purpose. Often overlooked because of its seemingly innocuous function, the purpose statement sets forth the intent of the district, the objectives to be achieved by the district, and its linkage to the comprehensive plan. The purpose statement is a key tool in establishing the link between the comprehensive plan and the zoning ordinance. It can also turn the zoning ordinance into an implementation mechanism for the plan. The purpose statement is most important when zoning is challenged, as it can show that the district is arranged in a fashion that carries out the intent of the comprehensive plan.

Use Regulations. A specified list of land uses allowed in a particular zoning district is the traditional form of zoning control, and the key surrogate for determining the land-use activity, which might have an adverse affect upon adjacent land uses or the character of a zoning district. Some performance zoning approaches have bypassed land uses as a surrogate and established district controls permitting any use if adhering to certain performance characteristics. However, such ordinances have met with some disfavor as a result of community difficulty in understanding the kinds of uses that might be located in a particular area, the complexity of applying such procedures, and the lack of predictability regarding possible development patterns.



In contemporary zoning ordinances, use lists tend to include permitted uses, permitted uses subject to special conditions, and special uses. Permitted uses are allowed by right. No conditions are attached to these uses, and if a development proposal meets the bulk and site development standards established within the district, the zoning review and approval should be swift and without constraint. Permitted uses subject to established conditions is a subset of the permitted use. These establish certain limits on a use by right which, if met, should lead to similar swift and unconstrained approval. This form of regulation is growing in popularity as it represents a performance type, use-based zoning that helps to carry out specific aspects of community land-use policy.

Special uses are generally accepted within specified districts, but need to be evaluated on a case-by-case basis. Thus, the zoning process for special uses requires a formal public hearing and an evaluation of the degree to which the uses meet criteria established for judging their merit and acceptability.

Other trends in use regulations include conditioning the character and location attributes of uses by establishing more permitted uses with standards, and focusing the conditional use process on those uses that tend to create the greatest land-use friction in the community. The bewildering array of new commercial activities, the mixing of uses, and the wide variety of building types has led to a departure from extensive listings of uses in favor of more general terms that are precisely defined in a performance manner. For example, retail and service uses may be listed in a commercial district and then defined to specify the attributes of such uses in the definition section of the ordinance.

The mixed use phenomenon is growing. Mixed uses are accommodated either through the district use list (sometimes with special review procedures established) or through a "broadening" of accessory uses, where the use is considered to be accessory to a principal building. Examples include retail facilities in residential buildings that serve building clients or a broad definition of accessory uses within a hotel or resort environment.

Bulk Controls. Bulk controls determine building location and the intensity of development on the lot. Conventional bulk control standards address yards, height, and floor area ratio (FAR). Bulk controls, which help to establish the character of development, have become the subject of attention in communities that are dealing with the replacement of older, smaller-scale buildings with new construction that meets the maximum bulk controls allowed in the district but tends to visually "overbuild" the lot. Communities have addressed this issue with sliding scale height standards, where maximum height is held back at a considerable distance from the front building line, reduced residential FAR, ground coverage limitations, and requirements for aggregate space between buildings.

Another trend in bulk standards is "build-to-lines," which helps to establish design character. This technique differs from setback by establishing a line that buildings must adhere to rather than be set back from. The purpose of build-to-lines is to encourage the development of a unified "street wall" that brings buildings closer to the street.

Traditional bulk standards, employed to control the location of accessory uses on sites, include site setbacks for off-street parking, free-standing signs and secondary structures such as garages, and the height and location of fences, landscape material, and play equipment. These measures indicate a trend toward using the zoning ordinance to establish and facilitate urban design policy in the community.

Development Standards

Using development standards in the zoning ordinance has increased significantly over the years. Zoning has evolved from a property protection tool to a measure for implementing land-use and urban design policy.

Development standards include such site controls as off-street parking and loading, landscape and buffering, signage,

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environmental standards, and site design policy. The following points represent just a few important trends in the evolution of development standards.

- The purpose of development standards is to ensure that certain facilities are accommodated on site (off-street parking, signs, fencing) and are designed and located to minimize the impact on adjacent properties and help establish a specific urban design image.
- Standards tend to be performance based, citing policies and criteria to be met, but providing the designer with flexibility in meeting such criteria.
- Elements of development standards are becoming more discretionary, with judgments of adequacy being made through plan review procedures administered either by professional staff or review boards.
- Plan submittal requirements are becoming more demanding and stringent. Some communities, in order to exercise design review and evaluate how well proposals meet performance standards, require site plans prior to granting zoning approvals.

The scope and detail of development standards have increased. Consider the following:

Parking and Loading. The parking and loading sections of today's zoning ordinances do much more than prescribe the amount of off-street parking and loading required for each use. Off-street parking sections may include standards for bicycles as well as autos. Landscape requirements for parking lots are also commonplace, usually addressing peripheral parking lot screening and landscaping of internal lot islands. Shared parking standards are becoming ubiquitous, recognizing that businesses within close proximity may operate at different peak hours and, therefore, allow the computation of parking needs based upon the characteristics of the use. Some ordinances allow for the development of a master parking plan to lower overall parking standards for mixed-use developments.

Loading standards have become less onerous, in recognition of the fact that loading often occurs through van delivery. As a result, the demand for large loading spaces in shopping centers has declined.

Landscaping. Landscape provisions reflect a growing concern with site design. Bufferyards that separate incompatible uses fall under "general" usage. Bufferyard standards tend to have a sliding scale, whereby the size of the buffer area decreases as the intensity of the plant material increases. Landscape screening requirements are fairly common today, especially for relatively unsightly areas such as outdoor storage and parking lots, and as a transition between dissimilar uses. Some ordinances even specify planting requirements within various front, rear, and side yards, and address the number of trees or shrubs per linear distance or turf square footage. Limitations on the amount of impervious surface are relatively commonplace, emerging in response to policies regarding drainage and urban design.

Architectural character is becoming more of an issue in zoning ordinances. Ordinances have not become appearance design manuals, but they do provide general design policy. Examples include regulations that limit garage doors from facing the street and specify garage location, establishing anti-monotony provisions, limiting the extent of a blank or unarticulated wall on major industrial or commercial buildings, and addressing domestic architectural design, such as porches or street-side entry doors.

Urban design and land-use policy is also reflected in a variety of other performance requirements found in contemporary ordinances, including spacing standards between specified land uses, the adoption of the Renton standards for locating adult uses, and using maximum square footage to classify a particular use as "permitted" or "special."

Planners and zoning officials continue to use environmental standards to control noise, vibration, dust, glare, light levels, smoke, and other nuisances. Originally established as a way to regulate industrial development, many ordinances have employed performance criteria in residential and commercial districts. However, difficulties persist in measuring these factors easily. In most cases, performance criteria are still enforced by complaint or initial certification rather than through any municipal technical evaluation.

Sign control. Signage is now an essential element of local land-use regulation, and a variety of approaches to on-premises sign regulation are used. Sign area square footage limitations based on property frontage (e.g. one square foot per linear foot of frontage) is the most common approach. Spacing standards for free standing signs, which determine sign distances from buildings on site and distance between sites, is also a common approach in sign control.

Many communities address sign control more rigorously by adopting concepts that control the placement and number of signs on a building. Evidence suggests a general movement toward reducing the height of free-standing signs and encouraging monument signs over pole signs.

Most sign control is tied to zoning districts, with sign area allowances being more restrictive in residential districts and less restrictive in commercial and industrial districts. Some cities employ approaches other than zoning districts when arterial streets traverse a variety of zoning districts and the desire is to have uniform sign control along the street. The use of overlay zones for sign control, or establishing sign requirements based upon street classification, have been used to address such situations. Furthermore, many communities review sign location and design as part of the design review process.

Definitions

Clear and complete definitions are key to a useful ordinance. The number of defined terms is growing, as is evident in a comparison of current ordinances with those of 10 years past. Today's definitions reflect the more litigious concerns of a modern society. Furthermore, communities have a strong sense of what is wanted in particular areas and need to consult an extensive bank of definitions to help define land-use types.

Reviewing and Adopting the Ordinance

The zoning ordinance adoption process should begin early. Indeed, it could be said that adoption starts with a review of the policy list early in the process. This is when the city council should affirm the direction of the revision. After a public hiatus created by the ordinance drafting period, the adoption process will become more visible, as a "working" or "public discussion" draft is released and reviewed.

The working draft should be exposed to the public, the development and real estate communities, city departments, and public interest groups for general review and discussion. In

many communities, zoning workshops are held to test the concepts of the ordinance publicly and to gauge reactions.

After a review of the working draft, a public hearing draft can be prepared to respond to comments. This is followed by a public hearing and, finally, the ordinance adoption. Interest in a zoning ordinance revision does not peak until the draft ordinance is made available for public review. Involving the broader community during the early stages of a revision usually fails to generate much interest. Once drafted, however, the zoning ordinance allows residents to see what is proposed in the districts where they reside, own property, or plan to develop.

Procedures that are built into the development review process should guide and support public discussion of the ordinance, production of ordinance summaries, and consistency in ordinance adoption. Ordinance adoption is really a two-part process that includes a revision to the text and a revision to the zoning map. Both tend to ignite controversy, so presentation of the documents should be carefully strategized.

Under certain circumstances, it may be best to move forward one step at a time, securing adoption of the text before addressing and presenting a revised map for adoption. In other cases, it may be impossible to separate the two. A public information plan, which clearly specifies the changes made in each, and the relationship of the documents to city planning and development policy, must be carefully developed.

> The zoning ordinance allows residents to see what is proposed in the districts where they reside, own property, or plan to develop.

Assessing, revising, and adopting a new zoning ordinance can be a daunting task. It requires a professional team that can assure full public education and presentation of the issues and responses. Ordinance revision also requires building understanding and support among a range of different constituencies, including those which are political. A commitment of staff time and financial resources is needed regardless of whether the city does the revision or employs a consultant.

Zoning revisions cannot happen quickly, and cities interested such an undertaking should understand the time investment. Indeed, controversial revisions may require several years, perhaps calling for an incremental adoption process. Nevertheless, as the key land-use policy document, the zoning ordinance must evolve and change with the times, a process that happens best through an organized, well-staffed revision process.

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Zoning News Briefs

Another Big Box Battle

A proposed big box retail development has produced divided opinions in the town of Northfield, Minnesota. A referendum was held in March to decide whether to allow large-scale commercial development in the town of 16,000. The referendum asked the question: "Shall the City of Northfield enact an ordinance to permit large-scale retail establishments in planned development zones in highway business districts?" The big box retailing industry won by a narrow margin (50.9 percent to 49.1 percent), thus paving the way for Target to construct a 126,000-square-foot store, which is to anchor a multi-phased retail development on Highway 3 near the edge of town.

Citizen-based groups squared off over the development. Citizens for Responsible Development opposed the zoning ordinance changes while Citizens for Target (later changed to Citizens for Northfield) supported the development proposal. Local media were at similar odds. *Northfield News* editorialized in favor of allowing large-scale retail stores, and the Minneapolis *Star Tribune* encouraged residents to "dare to think outside the big box."

Many Northfield residents are concerned about the impact of big box retailing on downtown businesses. Northfield's historic downtown is nestled along the banks of the Cannon River and within walking distance of the town's two private colleges. The downtown's primary commercial street (Division Street) is lined with unique restaurants, shops, and a historic inn. Northfield plays host to the annual Defeat of Jesse James Days, commemorating the outlaw's failed attempt to rob a Northfield bank in 1876. The Target development proposal led the Preservation Alliance of Minnesota to list downtown Northfield on its annual list of the state's 10 most endangered historic sites.

Target supporters claim the development will allow Northfield to generate lost tax revenue from residents traveling elsewhere to shop. It is hoped that people who travel to Target from the surrounding area will also spend money and time in the historic downtown.

Despite winning the referendum, the proposed Target store still faces hurdles, as the site for the store is located in adjacent Bridgewater Township. Northfield officials intend to annex the 30-acre site and amend the comprehensive plan to reflect the outcome of the referendum.

Another potential obstacle for the development is Northfield's ordinance. Target officials told the city council in April that elements of the planned development zone (PDZ) could prevent them from constructing the store. The PDZ contains standards dealing with street-level transparency of the building, requirements for multiple customer entrances, and provisions dealing with the amount and location of parking appropriate for the development. For example, the PDZ approved by the referendum required 40 percent transparency for the street level facade. Target officials, however, proposed only a six percent transparency. The city council is considering amendments to the PDZ that would preserve the essential elements of the ordinance. The amendments would not require another referendum, but would be heard at public hearings of the city council.

This is not the first time residents of Northfield have tackled the issue of big box retail. In 1986, citizens voted successfully against a proposal that would have allowed Wal-Mart to construct a store in the town. *Jason Wittenberg*

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Beyond Euclid:

Integrating Zoning and Physical Design

Part One: The Evolution of Physical Design in Zoning

By David C. Rouse, AICP, Nancy L. Zobl, AICP, and Graciela P. Cavicchia, AICP

The original rationale for the development of zoning was based upon the separation of uses to protect the public health, safety, and welfare. This approach was legitimized by the Supreme Court in the famous case of *Village of Euclid v. Ambler Realty Co.* While the *Euclid* case introduced the concept of use separation in 1926, the application of design regulations was already in place in the New York City zoning code of 1916. The New York ordinance, however, was not intended to regulate physical design beyond rudimentary dimensional requirements (i.e., setbacks, density limitations, etc.) to permit light and air and prevent overcrowding.

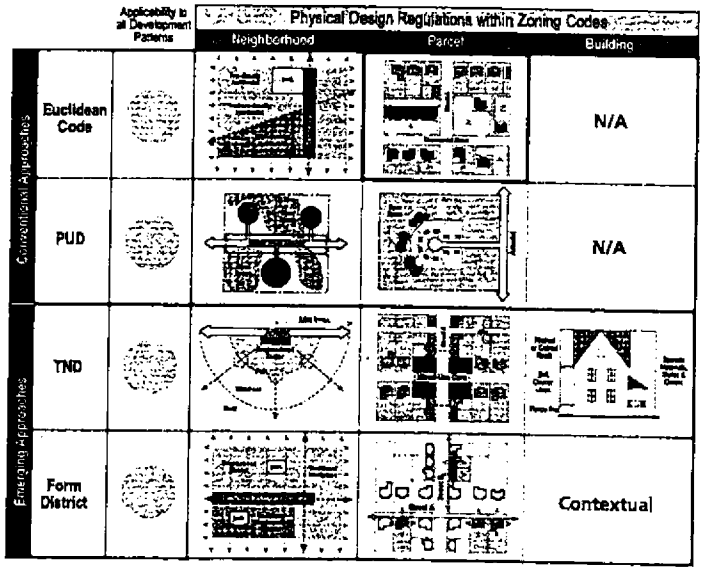
Since its inception, zoning has served as the regulatory foundation on which government has relied to address health and safety issues related to development. Yet, as development patterns adapted to changing social factors—for instance, from universal use of the automobile to widespread migration to the suburbs—the foundation of zoning remained static. A variety of techniques has evolved over the years to use zoning as a design tool to shape physical form rather than merely addressing health and safety issues. However, new techniques to deal with changing development patterns were typically applied on top of the established regulatory foundation. The results were more complex ordinances that added new layers of regulation without changing the underlying approach. Consequently, zoning codes that evolved from the Euclidean model have also proven to be limited in their ability to regulate physical design in the context of socioeconomic changes.

Despite its limitations, the purpose of zoning as established in the early 20th century—to provide a legal framework for the control of land development through measurable standards—remains valid. However, zoning is only one instrument in a larger system of managing development. But because it is the only instrument in that system that provides the legal support to regulate physical design and form, it has been the main support structure for governmental control of land development.

Admittedly, the regulation of land use and development encompasses a variety of issues beyond physical design. However, it would be impossible to address every facet of the development management process in one article. Therefore, this issue of *Zoning News* focuses on the regulation of built form as a tool for shaping development. It is the first article in a two-part series and describes the evolution of zoning techniques, from the Euclidean model to emerging regulatory techniques that have improved incrementally on that model. The premise of Part Two will be that while emerging techniques have gone a long way toward addressing the design limitations of the original model there is a need to move beyond incremental revisions to a more integrated approach. Part Two, therefore, describes new tools that could be used to address physical design as part of a comprehensive development management system.

Physical Design Regulations within Zoning Codes

This matrix shows how attempts to regulate development through incremental additions to the original Euclidean model have been valuable, but are still not totally successful in addressing larger issues related to physical development. While the foundation of zoning can be refined to accept changes in development patterns, it alone cannot be relied on to provide a contextual framework for development.



CONVENTIONAL APPROACHES

EUCLIDEAN CODES: have effectively dealt with the issues involved in the separation of land uses. Lack of design standards combined with market pressures have often created unintended physical consequences. The incorporation of Historic Preservation and Design Standards as overlays to zoning codes have contributed to the improvement of urban form and public space.

PUD: have brought more flexibility to zoning ordinances based on a comprehensive approach to development. These development patterns have often resulted in segregated enclaves of single uses.

EMERGING APPROACHES

TND: have been effective in creating development patterns while highly prescribing form, style and materials used. These codes may not effectively deal with a range of existing and new development patterns.

FORM DISTRICTS: have not yet been implemented but they have the potential to regulate development patterns by focusing on the character of existing districts.

> ZONING CODES THAT EVOLVED FROM THE EUCLIDEAN MODEL HAVE PROVEN TO BE LIMITED IN THEIR ABILITY TO REGULATE PHYSICAL DESIGN IN THE CONTEXT OF SOCIOECONOMIC CHANGES.

Conventional Approaches to Design Regulation

The Euclidean Model. The seminal case, *Village of Euclid v. Ambler Realty Co.*, lent its name to the common practice of separating

land uses to protect residents from the noxious practices of industrial businesses and other nuisances. Before *Euclid*, land-use codes protected health, safety, and welfare primarily through an elementary application of design standards. The 1916 New York City zoning ordinance established regulations on height, bulk, and density standards for skyscrapers and tenement housing. These standards were intended primarily to prevent the obscuring of sunlight by tall buildings and also to prevent health hazards due to overcrowding. The conventional practice that emerged from these precedents is the combination of basic dimensional requirements and separation of uses in what we refer to as the Euclidean model.

> THE PURPOSE OF THE PUD WAS TO OVERCOME THE INFLEXIBILITY OF CONVENTIONAL SINGLE-USE DISTRICTS AND TO ACHIEVE A MORE INTEGRATED DEVELOPMENT PATTERN.

The Euclidean model is usually applied to individual parcels with little consideration of the broader context (i.e., the physical form and characteristics of the surrounding neighborhood or district and the community as a whole). Typically, the same basic standards apply to a variety of situations. As it evolved, the Euclidean model was most often used in suburban or suburbanizing areas. Often, the standards that emerged have been applied to inherently diverse urban contexts, resulting in new developments that deviate from the established physical pattern.

Even in suburban contexts, there are variations in physical form that cannot always accept a generic standard. The variance is, of course, the universally accepted approach to dealing with idiosyncratic development issues, but the necessity of variances implies that the regulations are limited in their ability to respond to contextual issues.

The Euclidean model is the foundation of most current zoning ordinances. However, what was viewed at the time as a reasonable government response to dangerous living conditions is now considered to be a major contributing factor to sprawling development patterns, exclusionary housing practices, and, in terms of design, uniform landscapes. Several innovations to improve on the Euclidean model have evolved over the years to address these unintended consequences.

Historic Preservation Ordinances. The first attempt to relate design standards to neighborhood context was the historic preservation ordinance. The first historic preservation ordinance was established in Charleston, South Carolina, in 1931. Initially, historic preservation ordinances were limited in their ability to control aesthetics. Since that time, preservation laws have evolved to encompass a range of regulatory controls, from bulk restrictions to dictating types of building materials used.

While historic preservation ordinances have been very successful in preserving and improving the character of specially designated districts, they are limited in their geographic scope and ability to adapt to changing development patterns. Over the years, community leaders have recognized the need to address physical design issues on a wider scale than allowed by historic districts. As a result, an impetus emerged in the 1970s for more flexible design standards that apply to a broader range of contexts, but still maintain an essence of control. This resulted in new approaches to addressing physical design issues in ordinances, including the Planned Unit Development (PUD) and more generally applied design standards.

PUDs. The purpose of the PUD was to overcome the inflexibility of conventional single-use districts and to achieve a more integrated development pattern. Rather than apply design standards on a lot-by-lot basis, PUDs are based on a unified master plan, allowing flexibility of uses and exemptions from dimensional and density requirements without obtaining a variance. Nevertheless, the PUD still can be characterized as a piecemeal approach in the context of the entire community. While PUDs address a larger scale of development than the Euclidean model, they typically are randomly applied to properties that meet minimum tract size requirements. The resulting development patterns are usually not well integrated into the community, often creating segregated enclaves of homogeneous development.

Camden, NJ Source: USGS, Terraserver

Residential development based on Euclidean lot-by-lot standards.

Atlanta, GA Source: USGS, Terraserv

PUDs were created in an attempt to curb sprawl and control land consumption.

Design Standards. The concept of design standards in zoning ordinances originated with the basic dimensional requirements contained in the 1916 New York City ordinance and other early precedents. This concept evolved over the years from a narrow focus on health and safety to broader consideration of aesthetics and lifestyle as population migrated to the suburbs. Such commonly applied standards as streetscape requirements, parking lot design, landscaping, buffering, etc., became the norm for regulation of physical design in many communities.

Design standards are usually applied communitywide or to different land-use districts. While they have contributed to a better quality of physical design at a broader scale than historic preservation ordinances, design standards typically are generic in nature and do not adequately address variations in the physical character of different neighborhoods and districts. Consequently, new approaches have emerged to address the limitations of the conventional approach to design regulation. These approaches include the Traditional Neighborhood Development code, Neighborhood Conservation Districts, and Form District zoning.

Emerging Approaches

Traditional Neighborhood Development Codes (TND). The TND code is a product of the New Urbanist movement, which emerged in the late 1980s to promote a resurgence of the

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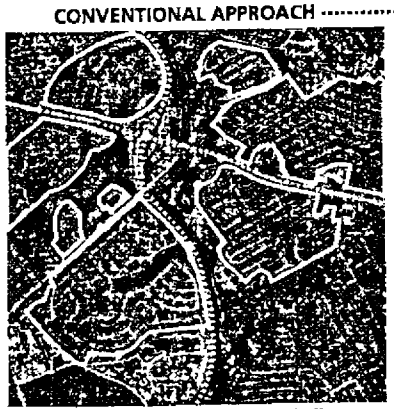
denser, mixed-use patterns that originated in older American cities and towns. TND's purpose is to improve the physical form of communities while minimizing traffic congestion, suburban sprawl, infrastructure costs, and environmental degradation through the development of fully integrated, mixed-use, pedestrian-oriented neighborhoods.

Although the concept of TND can apply to urban infill contexts, most TND ordinances are written for greenfield development. In this respect, TND zoning is similar to the PUD concept in that it requires an overall master plan rather than applying standards on lot-by-lot basis. However, unlike the PUD, TND prescribes design standards to arrive at a specific development pattern, whereas the PUD is primarily intended to provide relief from generic design standards.

TND ordinances also typically require a minimum parcel size, usually about 40 to 50 acres, which results in development enclaves similar in nature to PUDs. However, the detailed design standards for street patterns, mixed uses, building design, public spaces, and pedestrian connections that a TND provides have significantly improved the physical form and public realm of these enclaves.

TND'S PURPOSE IS TO IMPROVE THE PHYSICAL FORM OF COMMUNITIES WHILE MINIMIZING TRAFFIC CONGESTION, SUBURBAN SPRAWL, INFRASTRUCTURE COSTS, AND ENVIRONMENTAL DEGRADATION THROUGH THE DEVELOPMENT OF FULLY INTEGRATED, MIXED-USE, PEDESTRIAN-ORIENTED NEIGHBORHOODS.

CONVENTIONAL APPROACH ·····→ EMERGING APPROACH



Philadelphia, PA Source: USGS, Terraserver

Single-use enclaves have created isolated developments with minimum or no physical integration.

Gaithersburg, MD Source: USGS, Terraserver

Mixed-use TNDs have improved the physical form and public realm of these development enclaves.

When applied, the TND approach has proved effective in creating high-quality development patterns by prescribing a specific physical form and style. However, ordinances need to be able to deal effectively with existing and new development patterns on a range of scales in the context of their environments, including established neighborhoods and large-scale commercial and industrial developments. Regulations that address these issues can generally be referred to as contextual codes.

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Contextual Codes

Neighborhood Conservation Districts. The Neighborhood Conservation District (NCD) is a concept that was developed in the 1980s to protect neighborhoods with distinct cultural, historical, and architectural qualities. NCDs combine components of historic preservation and aesthetic design standards as an overlay to Euclidean zoning districts.

NCDs are generally more flexible than historic districts and TND ordinances and are intended to retain the overall physical character of the neighborhood rather than prescribing specific design standards or patterns. NCDs address rehabilitation, infill, and new construction in existing neighborhoods that may not qualify as historic districts. Changes in a NCD are subject to review similar to a historic district, but are not regulated as stringently (e.g., building mass and orientation rather than types of materials and colors). Neighborhood character is maintained in spite of allowing some alterations that would not normally be allowed in traditional historic districts. However, like historic districts, NCDs are limited in application to defined districts that

require an administrative board for designation and review. One method that has recently begun to apply contextual design standards throughout a community is referred to as form districts.

Form Districts. The form district is a new concept that builds on the neighborhood conservation district model by applying contextual design standards for new and infill development to the entire community. Separate standards are defined for individual form districts based upon the character of the sections of the community. This concept has not yet been formally applied in the United States, but is being developed in several communities. Louisville/Jefferson County, Kentucky, is currently formulating form district regulations for 11 separate districts to be incorporated into the zoning ordinance. Examples of these districts include the Downtown, Neighborhood, Traditional Neighborhood, Traditional Marketplace, and Traditional Workplace. As they are being conceived in Louisville/Jefferson County, form district regulations will be applied as an overlay to existing zoning districts. The underlying zoning district regulations will continue to address permitted and conditional uses, density, or intensity of development. Form district regulations will govern the physical design of permitted uses to ensure compatibility with adjacent uses and activities.

Because form district regulations have not yet been formally adopted by any community, it is not possible at this time to evaluate the effectiveness of this approach. However, the concept has great potential to add the flexibility and contextual application of design standards that is missing in conventional zoning and PUDs. Form districts also have the potential to improve on emerging approaches such as TND and NCD by applying a more comprehensive approach to design regulation that focuses on the character of neighborhoods and districts throughout the entire community.

However, the effectiveness of this approach when applied to sections of a community that lack an established development character is unclear. In addition, overlaying form districts on top of zoning districts will result in a more complex regulatory structure.

What's Next?

Traditional zoning regulations are important tools that responded to a particular time and place in the practice of planning. They guided development when knowledge about our environment was limited. As our knowledge of the environment improved, permutations of the traditional Euclidean zoning model evolved to more sophisticated levels. Where the Euclidean model was remiss in dealing with design as a development tool, new zoning practices were developed to regulate form and scale. New zoning tools, from early historic preservation ordinances to Traditional Neighborhood Development codes, have incrementally improved traditional zoning codes by making them considerably more flexible and more contextual. However, as these techniques became more refined, they also became more complex.

A typical consequence of the evolution of zoning is that techniques developed to improve the deficiencies of older practices lacked the ability to deal with newer issues comprehensively. Essentially, each zoning approach addresses certain design elements, such as flexibility and context, better than others. However, each technique lacks the ability to provide vision through design because it is missing at least one essential element in a comprehensive regulatory process. To effectively address vision through design, regulations should include all of the following elements:

- ***Regulations should be simplified and integrated.*** The common practice of adding layers of regulation to outdated ordinances increases the complexity of the ordinance.
- ***Regulations should be predictable, flexible, and adaptive.*** While predictability is a desirable outcome of the development process, overly rigid regulations can result in uniform development patterns and dependency on zoning relief procedures. Regulations also should have greater ability to adapt to changes in market demands and development practices.
- ***Regulations should be understandable.*** Ordinances should be written in plain English, not legalese, and be supplemented with graphic representation and/or web-based interactive display of design standards.
- ***Regulations should be applied as part of an integrated development management system.*** Although land-use regulations are, by necessity, mostly applied at the parcel level, they need to be conceived as part of a system that addresses the relationships between site design, the environment, infrastructure, growth issues, and overall community dynamics.

To be truly effective, a comprehensive process that regulates physical development needs to integrate the vision of a place. Zoning is an important tool in this process because it provides the legal foundation to manage development. However, zoning by itself cannot be relied upon as a visionary instrument. New methods are currently being developed that integrate regulation, physical design, and technology in attempts to better shape the physical environment consistent with the goals and objectives of individual communities. These methods, including Smart Codes, decision support systems, and other experimental tools, will be addressed in the next issue of *Zoning News.*

ZONING Reports

Urban Development: The Logic of Making Plans

Lewis D. Hopkins. Island Press, 1718 Connecticut Ave. N.W., Suite 300, Washington, DC 20009. 2001. 292 pp. $27.50.

Unwilling to preach from an ivory tower, Hopkins, a professor of urban and regional planning at the University of Illinois, discusses the practical realities and necessities of making plans and the ways in which circumstances alter the scope and focus of plans. He uses examples such as the development of the interjurisdictional Mahomet corridor plan, affecting a rural area north of Champaign, Illinois, to address the limitations and evolving coalitions involved in successful planning. Naturally, this discussion includes extensive references to the implications of plans for zoning and land-use controls.

Zoning News is a monthly newsletter published by the American Planning Association. Subscriptions are available for $60 (U.S.) and $82 (foreign). W. Paul Farmer, AICP, Executive Director; William R. Klein, AICP, Director of Research.

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ZONING News

OCTOBER 2003

AMERICAN PLANNING ASSOCIATION

Be Unique: A Model for Anti-Monotony in Residential Development

By Garner Stoll, AICP, and Gil Rossmiller

(Left) The unfortunate monotony of many American suburbs. A Parker, Colorado, subdivision prior to the new residential design minimum standards. (Below) A Parker, Colorado, neighborhood street scene with residential design minimum standards and new street standards.

In many rapidly growing metropolitan areas, production homebuilders reduce costs by adopting some of the principles of mass production to the construction of housing. Per-square-foot construction costs can be reduced by standardizing home models and building large numbers of the same model in close proximity. While lower home prices provide a benefit to buyers, communities have become increasingly concerned about the long-term impacts to the health and sustainability of neighborhoods when rows of identical or similar houses monotony comes to define them.

Parker, Colorado, has developed residential design standards to address the negative impacts of repetitive housing styles.

Some communities, such as Parker, Colorado, have developed residential design standards to address the negative impacts of repetitive housing styles—sometimes called anti-monotony codes. The basic tenet behind anti-monotony codes is to prohibit the close proximity of identical or similar models. (For a look at the contextual benefits of residential monotony, see "The Slippery Path to Monotony Control," *Zoning News*, April 1994.)

This issue of *Zoning News* examines how Parker addressed this problem through the adoption of residential design minimums. It will also describe the theoretical basis for the code, challenges with its application and administration, and the relative success of its outcomes.

Parker, Colorado, is a rapidly growing suburb located 26 miles southeast of downtown Denver. When Parker was incorporated in 1981, it had a population of 285. The population has since increased to over 33,000. National production homebuilders have taken advantage of strong markets to introduce popular home models at a lower per-square-foot price than are available in other parts of the metropolitan area. This has resulted in the rapid development of rows of repetitive roof lines, front facades, and garage doors (See "Setbacks and Garages in Residential Zoning,"

ASK THE AUTHOR

. . . about this article. Join us online!

During November 3-14, go online to participate in our "Ask the Author" forum, an interactive feature of *Zoning News*. Garner Stoll, AICP, and Gil Rossmiller will be available to answer questions about this article. Go to the APA website at www.planning.org and follow the links to the Ask the Author section. From there, just submit your questions about the article using an e-mail link. The authors will reply, posting the answers cumulatively on the website for the benefit of all subscribers. This feature will be available for selected issues of *Zoning News* at announced times. After each online discussion is closed, the answers will be saved in an online archive available through the APA *Zoning News* webpages.

Zoning News, February 2001). These repetitive features are visible both from local residential streets and adjacent collector and arterial streets. In 1999, the Parker town council became concerned about the aesthetics and sustainability of these neighborhoods. Consequently, Parker's residential design minimums were adopted in February 2000.

Intent

The basic intent of the design minimums is to provide a varied street scene and eliminate the reuse of identical or substantially similar buildings in close proximity to each other. The design minimums are applicable to all new single-family detached residential structures. To accomplish this, the standards set forth parameters for building mass and form and building variation requirements to place models of homes into groups and subcategories. The design standards prohibit identical or similar models from being repeated more frequently than every sixth house along the same side of the street.

Differentiation Criteria

The criteria for determining whether buildings are considered similar are bundled around two general concepts: building mass and form, and building variation.

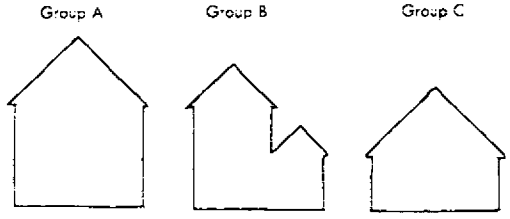
Building mass and form. Building mass is the outline of the structure, which is determined by its height, width, and depth. Building form is the style of the home, such as ranch, tri-level, or two-story. If the building mass and form are similar, then both the front and rear of the house are required to meet two out of three of the building variation requirements to be considered different.

Building variation. The three building variation possibilities are:

- *Substantially different roof types.* Roof types consist of mansard, hip (full), flat, gambrel, gable, and front-to-back (shed style).
- *Elevation plane variation.* The elevation plane is identified as the exterior wall of the structure. For an elevation plane to be considered substantially different, the secondary plane must project at least two feet from the primary plane and make up at least 30 percent of the entire elevation.

a. ***Building Mass:*** Considered to be the outline of the structure. This is determined by the height, width, and depth of the structure.

Building Form: The style of the home; including ranch, tri-level, or two-story structures.



All of these structures differ in mass and form.

If building mass *or* building form are similar, then the front and rear of each model is required to meet two of the three following criteria in order to be considered under a different group.

All drawings courtesy of the Town of Parker, Colorado

- *Exterior surface distinctions.* Exterior surfaces include brick, stone, stucco, and siding.

It is important to recognize that the six models needed to create different street scenes can be any combination of the above options. If six different models cannot be attained through building form or building mass, then any combination of two building variation schemes can also be employed to meet the minimum criteria. This allows for an almost infinite combination of possibilities for addressing the requirements of the design standards. It should be noted that occasionally a house does not meet the design criteria but is still visually acceptable, which achieves the goal of the standards.

Application of Standards

This conceptual approach to a residential design minimum standard allows the builder to do what they do best—to design and build homes that meet their customer's expectations. As noted, Parker's design standards are geared toward prohibiting monotony and repetition rather than prescribing a particular solution such as requiring minimum percentages of masonry on the exterior. As with any code, the more requirements, the more review and enforcement. Builders can be creative with very few proscriptive or prescriptive guidelines. However, this creates an intensive review process for Parker.

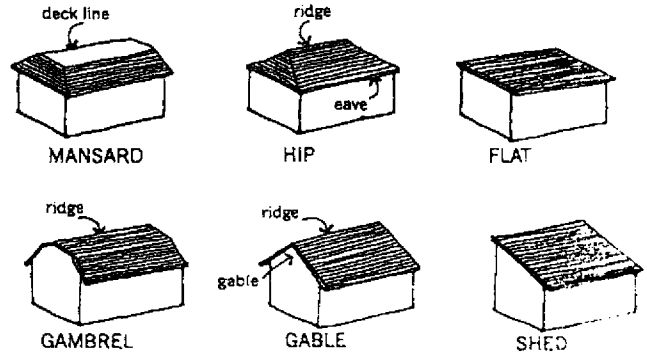
The process starts with the builder and his conceptual drawings. The town then reviews the drawings and suggests changes before the builder invests the time and money in a full plan design. This also allows the administrative officials to explain in detail the intent of the code.

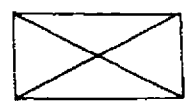
The format for plan submittal is to provide the front and rear elevations and a plan view of the roof on 11x17 sheets. Providing this information allows the town to see the offsets of the front and rear building planes. This is required for each elevation of all models.

Step one is to separate the models by mass and form. All the ranch styles are grouped together, as are the two-story and tri

b. ***Building Variations Requirements:***

1. Substantially different roof type: Roof types consist of mansard, hip (full or clip), flat, gambrel, gable, and front-to-back (shed style).





A full-hipped roof is considered to be substantially different from a partial hip, or clip

Gables with side-to-side trusses are substantially different than gables with front-to-back trusses

Garner Stoll, AICP, is the community development director for Parker, Colorado. He served as planning director of Oklahoma City for seven years. Gil Rossmiller is the chief building official for Parker, Colorado.

PARKER, COLORADO, RESIDENTIAL DESIGN MINIMUMS

(a) *Intent.* The intent of this Section is to require that buildings along the same side of a street or public open space in the Town be designed to provide a varied street scene and to eliminate the cause of identical or substantially similar buildings in close proximity to each other.

(b) *Applicability.* As of the effective date of the ordinance codified in this Section, this Section shall apply to all new single family detached residential structures in the Town. If this Section applies, Section 13.10.160 shall not, and vice versa. For pending developments, the applicable section is listed in Exhibit A to this Section, in the chart entitled Residential Design Minimum Ordinance Applicability.

(c) *Building variation requirements.*

(1) Identical or similar buildings may not be repeated more frequently than every sixth house along the same side of any street in a residential subdivision.

(2) Buildings shall be considered similar if they have similar building mass and building form. Guidelines for what shall be considered similar building mass and building form are contained in the Residential Design Minimums Handbook, which is contained in Exhibit B to this Section.

(d) *Soffit design.* No roof overhang or soffit, as measured from the finished side of the siding or premium material of the structure to the inside of the fascia board, shall be less than eight (8) inches, unless the structure embodies architectural styles of an historical nature; for example, a Santa Fe style which has a flat roof without any overhang; or a Tudor style which has a roof pitch of a ten (10) vertical inch rise over a twelve (12) horizontal inch run (10/12) or greater. Requests for such an exemption shall be presented to the Building Department prior to the issuance of a building permit, and documentation may be required.

(e) *Building trim.*

(1) Trim around windows shall be minimum of three and one-half (3½) inches wide, and trim around doors shall be a minimum of two (2) inches wide. If premium materials such as brick or stone are used on the front of a house, the premium material need not be used on the other sides.

(2) Trim details such as special moldings, colors and related details shall be used in the same manner on all sides of the structure as they appear on any side of the structure. However, shutters and any detail exclusively associated with the use of shutters and muntins may be used on the front without being carried to the other sides.

(f) *Landscaping.* The minimum front yard landscaping that shall be provided for each new house is as follows:

Plant Quantity and Type Size
1 tree 1.5" caliper or larger, and
3 shrubs 5 gallon container or larger

(g) The front building setback of one (1) lot shall be varied by a minimum of two (2) feet from the front building setback of any house within two (2) lots on either side of the subject lot.

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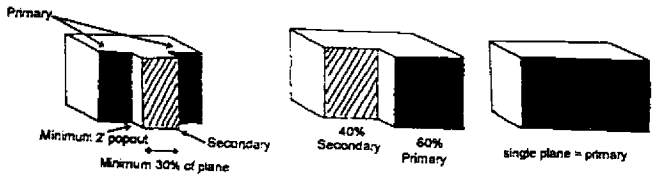
level models, creating, in total, three separate groups, any of which can be built adjacently. Of course, it is never this simple, which is why other building variations are used to differentiate one model from the next.

Step two is to analyze the models within a single group and determine if, for example, a two-story model could be adjacent to another two-story model. The first thing to analyze is the rear elevation since rear elevations typically have little variation. Some questions to consider:

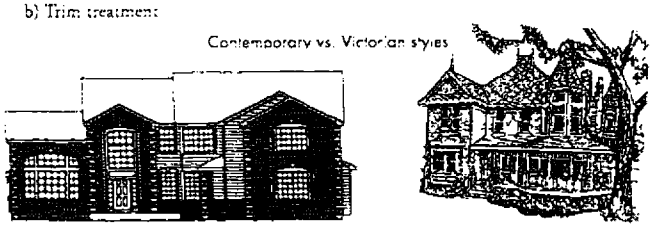
- Is there a 24-inch offset over 30 percent of the rear plane?
- Is the roof style different (hip vs. gable)?
- Is the trim style substantially different?

Elevation Plane Variation: The elevation plane is identified as the exterior wall of the structure. For an elevation plane to be considered substantially different from another model, the secondary plane must project at least 24 inches from the primary plane and constitute at least 30 percent of the entire elevation plane.



Exterior Surface Material Schemes: Exterior surface materials on a structure such as brick, stone, stucco, siding, or combination thereof may be used to create a distinctive differentiation between structures.

Example:
a) Different uses of masonry material
b) Trim treatment



The same review is then applied to the front elevation, which often is easier because many builders put a substantial amount of detail on the front. Generally, it is not difficult to have adjacent two-story houses. Rarely would different elevations of the same model be approved to be next door to each other. But it has happened.

At this point in the review, there are three groups of models, any of which could be next door to each other. The next step is to separate these three groups into at least six categories.

The importance of the format of the matrix cannot be overstated. Notice how the models in group A split into categories I and IV, group B into categories II and V, and group C into categories III and VI. The code allows the same model to be placed a minimum of two houses apart, as long as one of the first two building variation criteria are met (either the roof or the bulk plane). Typically, the roof is used, since many builders have hip and gable elevations on the same model.

After several reviews, and pending completion of the matrix, the elevations are displayed and street scenes created. In doing so, the town can analyze visually whether required building variations have been achieved.

When the matrix is complete, the builder labels the lots with the category numbers. From this point, the construction drawings move through the master plan review process. When the builder applies for a building permit, staff confirms that the model and elevations are in the same category as labeled on the lot layout. Building inspectors then verify that the correct model and elevation is built.

While this review process may seem subjective, it gives the community and the builder the most latitude for design. The process can be complex and time consuming, but with experience it can be accomplished with a minimum of pain.

Residential design minimums that prohibit repetition and monotony can be an important element in creating neighborhoods with identity and character. However, these standards need to be combined with other design standards. Parker recently developed design standards for street width and character, minimum connectivity requirements for streets, sidewalks, and trails, as well as minimum park, school, and open space dedication requirements.

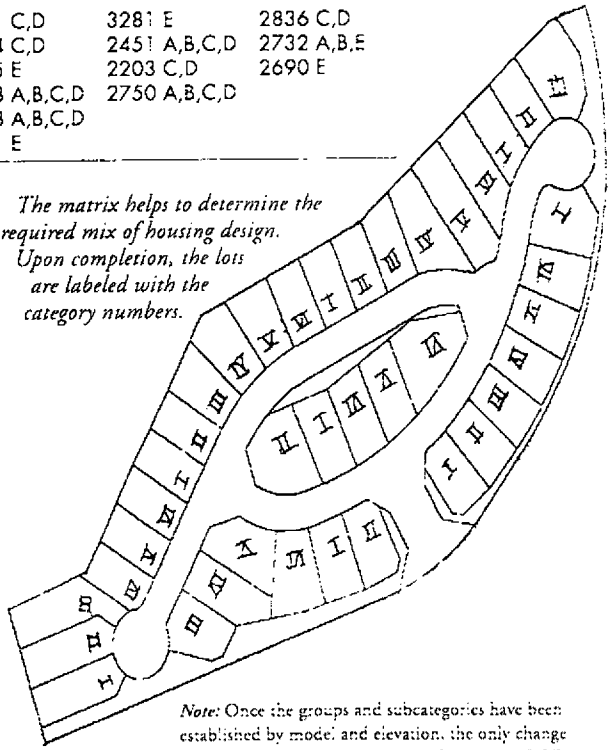
HOUSING DESIGN MATRIX

A	B	C
3271,3024 2445,2261 2278,2538	3281,2451 2652,2203 2750	2836,2732 2690, 2345

I	II	III
3271 A,B,E 3024 A,B,E 2445 A,B,C,D 2261 A,B,C,D	3281 A,B,C,D 2451 E 2652 A,B,C,D 2203 A,B	2836 A,B,E 2732 C,D 2690 A,B,C,D 2345 A,B,C,D

IV	V	VI
3271 C,D 3024 C,D 2445 E 2278 A,B,C,D 2538 A,B,C,D 2261 E	3281 E 2451 A,B,C,D 2203 C,D 2750 A,B,C,D	2836 C,D 2732 A,B,E 2690 E

The matrix helps to determine the required mix of housing design. Upon completion, the lots are labeled with the category numbers.



Note: Once the groups and subcategories have been established by model and elevation, the only change allowed is to add a model to the subcategories I–VI, and/or a change in the designation of lot sequence in the subdivision (for vacant lots).

The residential design minimums were adopted in 2000, so the long-term impacts on Parker have yet to be determined. Still, the pictures within illustrate what a difference thoughtful design can make for individual housing developments. For a complimentary copy of the Parker, Colorado, residential design minimum standards, contact Michael Davidson, Editor, *Zoning News*, American Planning Association, 122 South Michigan Avenue, Suite 1600, Chicago, IL 60603, or send an e-mail to mdavidson@planning.org.

News Briefs

Affluent Community Sets Precedent with Inclusionary Zoning Ordinance

The City of Highland Park, Illinois, recently approved a precedent-setting inclusionary zoning ordinance. Although nearby communities, including Evanston, Chicago, and Oak Park, have considered inclusionary housing, Highland Park will be first in the state to implement such regulations.

As is the case in many Chicago suburbs, this affluent North Shore community of 32,000 has experienced a rapid decline in affordable housing. Existing rental properties were either converted to condominiums or demolished. Newly constructed single-family homes regularly sell at or around $1 million, and existing homes have skyrocketed to a median sales price of over $400,000. The median household income for Highland Park residents is $157,861. However, 80 percent of the locally employed work in the retail and service sectors and have an average annual salary of less than $35,000.

Maintaining an economically diverse citizenry and encouraging the production of affordable housing have long been priorities of Highland Park city officials. In fact, the Housing Commission of Highland Park was created in 1973 specifically to address those priorities. In both the 1976 comprehensive plan and in the 1997 update, community goals for the provision of affordable housing are explicitly stated. In 1998, the city council directed the Housing Commission to prepare an affordable housing element, which resulted in the 2001 adoption of the *Affordable Housing Needs and Implementation Plan*. One of the key action steps recommended in the plan was the development of an inclusionary housing program within the relatively short timeframe of two years.

The new regulations for the program apply to all residential developments—new construction, renovations, conversions—that result in five or more units. Developments covered under the ordinance are required to set-aside 20 percent for affordable units. For example, in a 15-unit development the builder would set aside three units for the program. While the city prefers that affordable units be constructed on-site, developers of smaller single-family projects may opt out by making a cash payment of $100,000 per affordable unit to a housing trust fund. The payment represents the cost to the developer of making a market-rate unit affordable. Single-family units and condominiums that are on the market must retain permanent affordability. Rental units are required to retain affordability for 25 years.

The ordinance states that adequate dispersal of affordable units throughout covered developments is required. In addition, the exteriors of the affordable units are required to be similar to those of the market-rate units in the same development. It also states that ". . .external building materials and finishes shall be substantially the same in type and quality." Builders are given some leeway on the interior of the affordable units, but they must have the same bedroom mix and energy efficiency improvements as market-rate units. Affordable units are also required to meet minimum size requirements based on the number of bedrooms and unit type (attached or detached).

Builders of covered developments are required to submit an inclusionary housing plan during the permit process in order to illustrate that the project meets program requirements. Developers also must submit a phasing plan to ensure that affordable units are built in a timely manner. In exchange for participating in the program, developers become eligible for a variety of incentives, including fee waivers. Developers can also take advantage of a density bonus granting one additional market-rate unit per affordable unit provided.

One of the more interesting features of the Highland Park program is its target population. In keeping with traditional inclusionary zoning programs, the ordinance is intended to assist low- and moderate-income individuals and families. What is unique about this program is that once the income eligibility requirement is met, priority will be given to families currently residing in the city and to families where the head of household, spouse, or domestic partner works for the Highland Park government. Priority then will be given to families where the head of household, spouse, or domestic partner works for any other employer located within the city. The adoption of both a resident and worker preference within an inclusionary program is precedent setting.

The ordinance, approved by a unanimous city council vote on August 25, amends the *1997 Highland Park Zoning Code*. A related resolution was also approved to allow for the cash-in-lieu payments. The new regulations take effect October 1, 2003. For a complimentary copy of the Highland Park, Illinois, inclusionary housing zoning ordinance, contact Michael Davidson, Editor, *Zoning News*, American Planning Association, 122 South Michigan Avenue, Suite 1600, Chicago, IL 60603, or send an e-mail to mdavidson@planning.org. *Lynn M. Ross*

Changes to New Jersey Affordable Housing Law

The New Jersey Council on Affordable Housing (COAH)—the state agency charged with administering New Jersey's fair-share housing program—has announced a plan to overhaul the system that has governed affordable housing planning in the state since 1985.

The proposed changes will eliminate the fair-share formula in favor of a new "growth-share" approach. The new approach is a significant change from the previous method of calculating affordable housing goals. It seeks to link the production of affordable housing with municipal development and growth, whereas the previous approach assigned housing goals based on population growth projections and other data. Although many housing advocates have argued for the growth-share methodology, COAH's approach has generated substantial opposition in the housing community, who see it as watering down its principles.

> The new "growth-share" approach seeks to link the production of affordable housing with municipal development and growth.

Under the fair-share approach, municipalities that chose to adopt the fair-share goals established by COAH and plan for their allocated amount of affordable housing would receive protection from lawsuits brought by builders under the *Mount Laurel* State Supreme Court decisions. The proposed rules will change the way those goals are calculated.

The 1975 and 1983 *Mount Laurel* decisions ruled that developing municipalities have a constitutional obligation to provide a realistic opportunity for the construction of low- and moderate-income housing. A zoning decision or ordinance that denies the opportunity for the construction of affordable housing fails to meet this constitutional requirement and makes the municipality vulnerable to lawsuits. Municipalities that have addressed their fair-share housing goals and have been certified by COAH are protected from *Mount Laurel* lawsuits. However, participation in the COAH process is voluntary, and municipalities that elect not to participate risk lawsuits from developers.

As of 2001, 48 percent of the cities and towns in New Jersey were participating in the COAH process. Between 1980 and 2000, towns across New Jersey created opportunities for 60,731 low- and moderate-income housing units through zoning and other techniques. Almost 29,000 units were constructed. Under the proposed growth-share approach, municipalities shall provide one affordable housing unit for every ten residential units built. Also, for every 30 new jobs created, the municipality shall provide one unit of affordable housing. Therefore, communities that choose not to grow will not be required to plan for affordable housing to satisfy COAH requirements. Existing affordable housing units that are in need of rehabilitation, and unmet obligations for affordable housing from the previous rounds, are also included in the growth-share approach.

The Coalition for Affordable Housing and the Environment, a New Jersey-based advocacy organization, disagrees with the ratios that have been proposed in the new rules. Executive director Paul Chrystie says, "the growth-share ratios that we recommend were one in five for residential units and one residential unit for every five jobs."

According to a Department of Community Affairs press release, the proposed rules will result in better planning for affordable housing based on New Jersey's smart growth agenda. It states, "under the proposed methodology, affordable housing will not drive planning decisions; instead, sound planning decisions will drive the location of, and type of, affordable housing to be provided."

Susan Bass Levin, commissioner of the Department of Community Affairs, and chair of COAH, says "Governor McGreevey and I feel strongly that, by working with towns, giving them the power to control their own growth, and increasing the options for towns to meet their obligation, we have fundamentally changed the way we approach affordable housing in the state of New Jersey."

COAH's growth-share approach allows for a greater degree of freedom for individual jurisdictions, which worries some affordable housing advocates. Alan Mallach, FAICP, research director of the National Housing Institute, says, "the whole thing is part of the strategy to come as close as you can to nullify *Mount Laurel*." He says, "It is not the growth-share approach that most advocates object to, but the way COAH is doing it."

According to Mallach, included in the proposed rules is a plan to give municipalities credit toward future affordable housing obligations for the units that have already been built or planned for. Affordable housing advocates disagree with this part of the new methodology because it gives credits for units that have not yet been built. In essence, Mallach says, "they have minimized production."

The plan also allows for up to 50 percent of a municipality's obligation to be fulfilled through the development of senior housing, and another 50 percent to be transferred to other municipalities in the same housing region or a statewide affordable housing bank.

A preliminary analysis by Mallach concluded that the proposed rules would dramatically reduce the amount of affordable housing that is likely to be built. The analysis also found that the new rules are hostile to families with children, will reinforce the concentration of non-elderly, minority, and low-income families in central cities, and will do nothing to address sprawl and unsustainable development. Chrystie agrees, saying, "the new rules will produce far less affordable housing...and undermine smart growth by skewing the planning process."

According to Mallach, the bottom line "is that New Jersey suburbs could find themselves completely in compliance with *Mount Laurel*, without ever building a unit of affordable housing for families for children." For complimentary copies of the COAH proposal substantive rules, the COAH proposal procedural rules, and a COAH analysis by National Housing Institute research director, Alan Mallach, FAICP contact Michael Davidson, Editor, *Zoning News*, American Planning Association, 122 South Michigan Avenue, Suite 1600, Chicago, IL 60603, or send an e-mail to mdavidson@planning.org. *Rebecca Retzlaff, AICP*

[illegible]

In short, we identify areas by Transect zone, but we don't zone them with a uniform T-3 zoning, for example. We give them a zoning package that is consistent with T-3.

How can New Urbanists improve the integration of the whole development management system?

Coordination is important. In Orlando we had planning, code enforcement, building permits, and even Community Development Block Grant funding all in one department. In Nashville planners have to work with those other departments to ensure that they understand what we mean in our plans and are permitting the right kinds of places.

NEW APPROACHES

Form-Based Zoning

Many New Urbanist practitioners work to achieve different outcomes by using both new formats and new standards. The dominant new approach is form-based, making building type, street type, or a combination of the two the primary regulatory elements. The Columbia Pike Form-Based Development Regulations described in Chapter 3 are an example of the form-based or typological zoning approach. This approach generally combines the features of a Regulating Plan with a set of building envelope standards governing height, siting, building elements (e.g., windows and entries), and use for a number of building types. New Urbanist Peter Katz explains that "form-based coding is founded on the idea that a community's physical 'form' is its most intrinsic and enduring characteristic" and that form "includes not just buildings and blocks, but a constellation of physical elements that may include public spaces such as streets, squares, and greenbelts; civic infrastructure such as canals, bridges, and drainage systems; and natural features such as lakes, riparian corridors and beaches." Form-based zoning approaches can also be used within the framework of a conventionally structured ordinance, supplementing or replacing sections dealing with dimensional, design, and street standards.

Transect-Based Zoning

New Urbanists have begun to use the urban-rural "transect" as a classification system or organizing principle for planning and zoning. In the natural sciences, transects are geographical cross-sections used to survey areas. In urban design and planning, the transect approach is applied to built as well as natural environments by New Urbanist architect and town planner Andres Duany. The transect system classifies six zones using typical elements of natural and built habitats, ranging from most rural to most urban. The zones are: T1: natural; T2: rural; T3: suburban; T4: general urban; T5: urban center; and T6: urban core.

One of the key concepts of transect planning and zoning is the idea of creating what are called "immersive environments"—places where various physical characteristics of buildings, landscape, and the public realm combine to create a coherent sense of place. They vary in intensity of use from the most rural (T1) to the most urban (T6). All zones, however, contain a mix of uses with the density, intensity, and design characteristics depending upon the degree to which the area is rural or urban. An essential aspect of planning based on the transect system is creating a proper balance between natural and human environments along the rural to urban transect. Avoiding the urbanizing of the rural, such as placing office towers in suburbs or, equally damaging, ruralizing the urban, is another aspect of using a transect system.

Duany Plater-Zyberk and Company have developed a model transect-based code, known as the Smart Code. The code begins with a list of the basic principles of good urban form and then proceeds with specific sets of standards that vary from one transect zone to another. The standards address:

- *building disposition*, specifying lot size, frontage, and setback requirements for each zone;
- *building configuration*, specifying frontage type (e.g., porch, stoop, or gallery) and building height;
- *building function*, which indicates the uses prescribed for each transect zone;
- *parking;*

- *street sections;*
- *architecture;*
- *landscaping; and*
- *signage.*

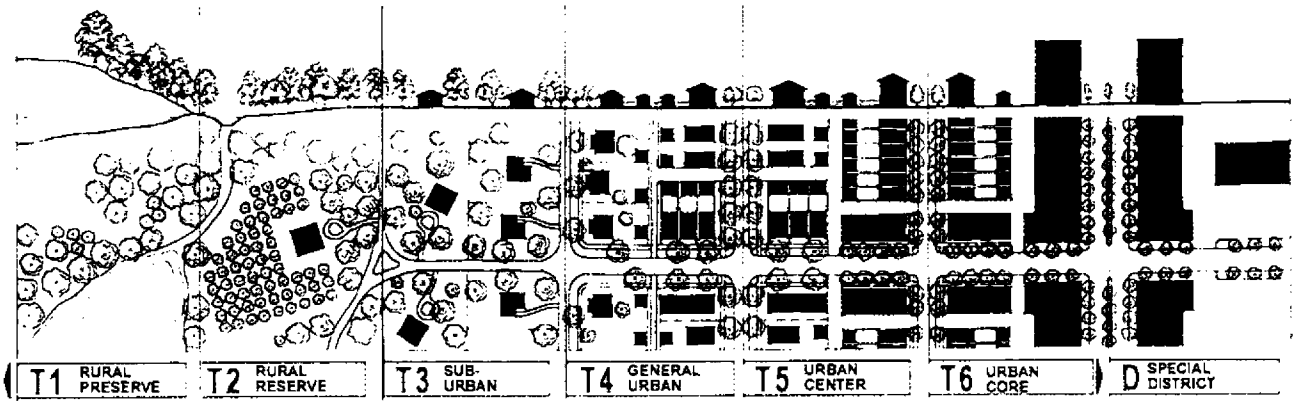
Applying standards to each transect zone is a matter of specifying the degree of urban intensity appropriate to that zone. A few general guidelines give a sense of what this entails. At the rural end of the continuum, standards call for:

- less density;
- smaller, detached buildings;
- deep setbacks;
- paths, trails;
- open swales;
- country roads; and
- irregular plantings.

At the most urban end of the continuum, standards call for

- higher density;
- larger, attached buildings;
- shallow setbacks;
- street and alley sections;
- a formal street grid;
- wide sidewalks; and
- formal plantings.

As one moves along the transect from rural to urban conditions, the density and complexity of human elements increases while the density and complexity of natural elements decreases.



washingtonpost.com

Traditional Zoning Can't Meet the Challenge of Modern Development

By Roger K. Lewis

Saturday, July 24, 2004; Page F04

Among the innovations championed by the New Urbanist or neo-traditional movement, and by many other architects and planners, are "form-based" zoning codes.

The primary goal of form-based codes is to guide the configuration and architectural quality of urban and suburban environments. That contrasts with conventional zoning, which often concentrates on the use of buildings, such as whether a block is residential or commercial.

Judging from the aesthetic dysfunction in much of what we have built, form-based codes are long overdue.

Actually, we should eliminate the term zoning. It implies separation, exclusion and disconnection, and it suggests nothing positive about how neighborhoods and buildings should look or relate to each other.

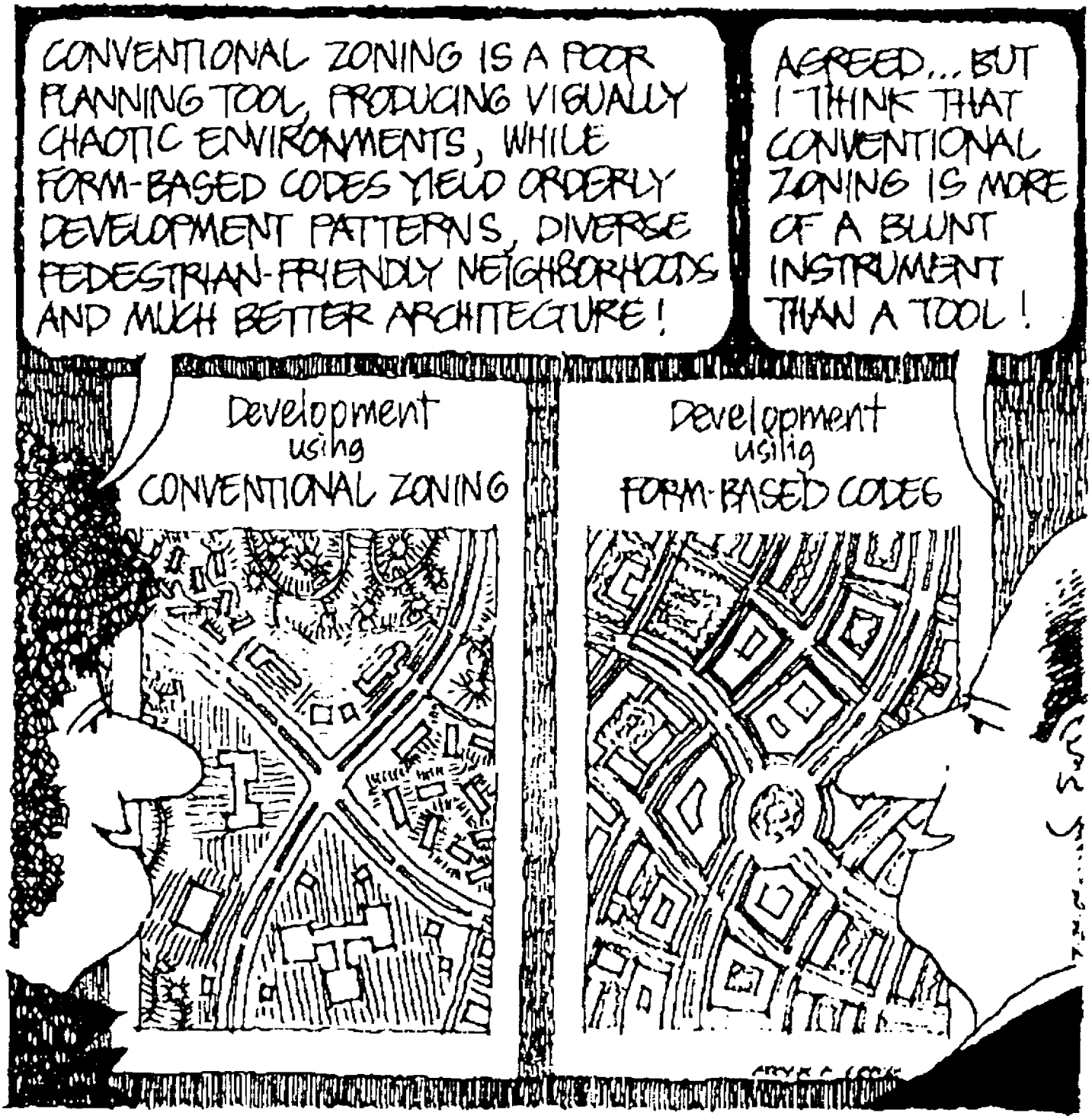
In Houston, a city without zoning, the term is taboo. In a recent report recommending new housing strategies for the city, I wrote that, in America, "planning is not zoning, and zoning is not planning. Conventional zoning generally has failed as an effective planning tool for creating balanced growth, good urban design, beautiful cityscapes, or affordable housing. In many jurisdictions, the effect of zoning has been to exclude the less affluent."

To further convince Houstonians of the merits of planning and land-use regulation, the report went on to state that "unconstrained by conventional zoning regulations, Houston has a unique opportunity that no other American city has: it can undertake effective planning not trumped or compromised by existing zoning."

Conventional zoning ordinances divide a municipality or county into zones, define and designate the land use for each zone and stipulate for each zone and zoning category maximum densities and building heights, maximum lot coverage and minimum setback, yard and lot dimensions. Zoning regulations also often require minimum parking accommodations.

Historically, the purpose of zoning has been less as an urban design tool and more as a way to protect public health, safety and welfare, and private property values. Zoning presumably maps the future. Yet for many property owners, zoning's primary benefit is ensuring that potentially harmful, incompatible uses of neighboring properties will not threaten their properties and their legitimate uses.

But zoning codes, frequently drafted by lawyers rather than designers, tend to be too free and flexible where more guidance is needed and too limiting where flexibility is appropriate. Typically, the most constraining inflexibility concerns zone boundaries and use limitations, especially prohibitions against mixed-use development. The most problematic over-flexibility is the lack of clear criteria to guide site


CONVENTIONAL ZONING IS A POOR PLANNING TOOL, PRODUCING VISUALLY CHAOTIC ENVIRONMENTS, WHILE FORM-BASED CODES YIELD ORDERLY DEVELOPMENT PATTERNS, DIVERSE PEDESTRIAN-FRIENDLY NEIGHBORHOODS AND MUCH BETTER ARCHITECTURE!
AGREED... BUT I THINK THAT CONVENTIONAL ZONING IS MORE OF A BLUNT INSTRUMENT THAN A TOOL!
Development using CONVENTIONAL ZONING
Development using FORM-BASED CODES

planning, streetscape design, building massing and architectural form.

Consequently, conventional zoning has produced patchwork quilts of single-use districts and private enclaves, often with minimal vehicular, pedestrian or visual connections between neighboring zones. It guarantees automobile dependency and, within neighborhoods, reinforces socioeconomic homogeneity and isolation from other neighborhoods.

In contrast, form-based codes, while allowing great freedom in determining uses, establish definitive criteria for essential urban and architectural design elements: street network and block patterns; layout and configuration of public open space for parks and plazas; disposition of buildings, drives and parking; and height, volume and even facade design requirements for both general building types and special buildings -- civic and institutional structures, schools, retail shopping, entertainment and sports venues. Unlike conventional zoning, they seek to erase rather than reinforce boundaries.

Form-based codes also regulate density, but they specify minimum as well as maximum densities and include reasonable provisions for increasing density where justifiable, such as near public transit stops.

Regrettably, implementing form-based zoning is not easy.

First, because long-standing zoning ordinances create vested property rights and values, any changes must take those rights and values into account and, to a reasonable extent, preserve them. Otherwise, changes can be confiscatory and unconstitutional. Yet preservation of the status quo, based on zoning maps drawn many decades ago, can seriously conflict with current planning and development aspirations.

Second, because land-use planning precedes land-use regulation, form-based codes must be based on well-researched, comprehensive master plans. Without such plans, there is no rational way to establish and legally justify form-based urban design. However, many jurisdictions have neither the resources nor the planning staff necessary.

Third, because some state charters and statutes -- for example, in Virginia, Pennsylvania and Texas -- limit local government's ability to tinker with land-use regulation and thus infringe on property rights, imposing requirements beyond those already in place can require state legislative approval.

Finally, because the concept of form-based codes is unfamiliar, a city or county cannot enact such a measure without first helping residents understand the concept. That requires diligent explanation, illustration and demonstration, including comparing alternative development scenarios that show what conventional zoning yields with what results from form-based zoning.

Probably the most feasible strategy is to make new plans for particular sectors within a jurisdiction where intense growth is desired or is likely to occur as a result of development trends, zoning or both. Form-based design and development criteria can then be applied as a zoning overlay, without rescinding existing ordinances or drawing totally new zoning maps.

A good example of that approach is the Carlyle neighborhood in Alexandria, a multi-block development south of Duke Street and west of Old Town. Now nearing completion after nearly 15 years of construction, Carlyle's overall urban pattern and architectural character are governed by a detailed master plan and form-based design criteria. The Alexandria City Council approved them as a special-purpose zoning overlay before a single spade of dirt was turned.

Form-based design regulations, rather than old-fashioned zoning, are shaping the redevelopment of the centers of Silver Spring and Rockville.

Fortunately, city and county planning officials throughout the United States, along with urban designers and architects, are increasingly acquainted with form-based codes. At the same time, there are more examples of new development shaped by form-based regulations instead of conventional zoning.

Thus, despite impediments, persuading constituents to embrace form-based codes should get easier.

Roger K. Lewis is a practicing architect and a professor of architecture at the University of Maryland.

American Planning Association

Making great communities happen

Reflections on Big City Zoning

Tuesday, April 27, 2004

By Jim Hecimovich
Chief Editor, Planning Advisory Service Reports

Bill Klein, APA's Director of Research, and Armando Carbonell, Lincoln Institute of Land Policy, acted as co-moderators of this session, which has its foundation in a number of developments. The Lincoln Institute has been bringing technical assistance and opportunities to city planning directors for the past four years in the form of a retreat where planning directors network over a topic chosen by the directors. APA is now a partner in this group, which also includes Harvard University's Graduate School of Design. At this conference, APA has made a special effort to better serve planning directors, including provision of a special series of sessions devoted to the needs of planning directors. APA has also announced the launch of a new quarterly publication for APA's city planning directors network.

This session was prompted specifically by the most recent planning directors retreat. At that retreat, Jerold Kayden, from Harvard's School of Design, presented a paper looking at zoning, its history, its fundamental elements, and the way in which zoning can be adapted to become the "means to an end" -- principally the "end" envisioned in plans and their goals. Professor Kayden's paper was also the foundation for the inaugural issue (January 2004) of *Zoning Practice*, the successor publication to *Zoning News*, a monthly publication from the research department at APA.

Professor Kayden noted that it is a particularly good time in history to talk about zoning because the public, more than ever, seems to have a better "feel" for what zoning is about and what it can accomplish or restrict. For this reason, it is also a good time for planners to reshape zoning to reshape cities in ways that achieve goals related to creating "urban" places.

The first step along this effort to reshape zoning, according to Kayden, is to decide on a baseline definition for zoning. New ways of thinking about what this baseline definition might encompass need to recognize zoning's three fundamental aspects:

- Conceptual (what zoning is and does)
- Legal (how zoning is legislated)
- History (what has zoning been up to now)

Traditionally, zoning has controlled what takes place on private and, sometimes, public lands through the trio of use, shape, and bulk controls.

Using an analogy to music, Kayden suggests that what this trio of zoning instruments needs is new music to play. He insists that, within these three instruments, there is a lot of flexibility, provided by state enabling legislation authorizing zoning, to play a variety of compositions. Specifically, there are five ways of pushing this trio to play different music. Kayden stressed and reminded the audience throughout his presentation that each of these five methods is legal within the flexibility provided by nearly all state enabling legislation.

1. ***Make zoning prescriptive rather than proscriptive.*** Zoning historically has prohibited what can happen. But zoning can be used to mandate what will happen. Referring back to the instruments of the trio, Kayden notes that Floor Area Ratio (FAR) is proscriptive inasmuch as it does not dictate the form of what must appear

on a site; rather, it uses bulk without prescription. Rather than allowing a building with a proscribed FAR of 4.0 on a site, which could result in a 4-, 8-, 16-, or 32-floor building on the same site, why not prescribe that the building must fall within a range of 4.0 to 8.0 FAR, with prescribed setbacks and other prescriptive measures? Such prescription comes much closer to achieving the form envisioned in the plan governing the area or the jurisdiction in which such a building would be erected.

2. ***Use form-based zoning.*** A simple definition of form-based zoning would be standards that address form without regard to use. For instance, the prescriptive requirement for an area could be that all buildings, regardless of use, must be constructed to the front lot line. Pushed to its extreme, form-based codes could end use-based or bulk-based zoning.

3. ***Use performance zoning.*** Kayden distinguished his definition of this type of zoning from the one created by Lane Kendig more than 30 years ago. Performance zoning allows uses on the basis of their effects. Kayden suggests that this principle can be pushed to prescribe the "performance"; in other words, if the community goal, as expressed in its plan, is to "contribute to sustainability," the zoning standards can be fashioned to prescribe specific outcomes from the use.

4. ***Use zoning to achieve social equity.*** Kayden believes that it may be time to push the envelope on linkage, fair-share provisions, and inclusionary zoning. Imagine, he says, zoning that prescribes use and habitation on the basis of income.

5. ***Try market-based zoning*** . This approach would be prescriptive in a voluntary sense. It would employ incentives and negotiation, looking beyond the site itself. Kayden believes that Transfers of Development Rights (TDRs) are a foundation for this kind of thinking, and, of course, bonuses have been used to enhance downtowns through provision of public places, through streets, etc.

The session continued with presentations by two big-city planning directors: Peter Park, recently named planning director for Denver, Colorado, and formerly planning director in Milwaukee, Wisconsin; and Con Howe, planning director of Los Angeles.

Park noted the differences between Milwaukee and Denver. In Milwaukee, he was faced with inconsistent design principles, a complex zoning ordinance format and permit review process, and few standards. But Milwaukee also had advantages. The review process was consolidated in one place and the mayor was committed to the principles of urbanism. In Denver, there was also a complex zoning ordinance format, in addition to which Denver had separate permit review processes, numerous Planned Unit Developments, and, in his works, in short, is "overzoned."

Park provided a series of slides of clearly urban commercial and residential areas in Milwaukee that he said would be nonconforming under current zoning provisions. During his tenure there, he instituted form-based zoning for neighborhoods, focusing on the public quality of buildings. He also noted that Milwaukee's consolidated permit review process was a form of incentive zoning.

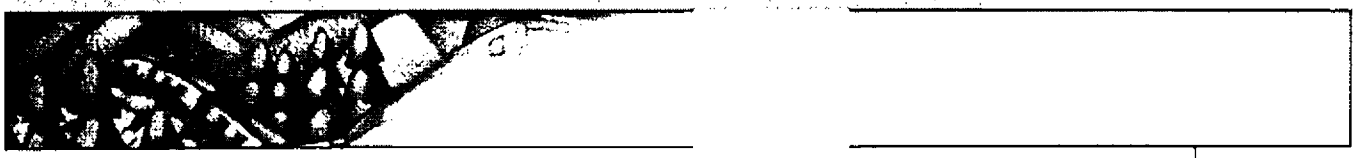
Park reiterated that zoning must be the means to an end, with the end being what is envisioned in a plan. His illustrations of "required transparency zones" on the ground floors of mixed uses and commercial uses made clear that his approach in both Milwaukee and Denver has been very prescriptive. He also illustrated ways to achieve definition of streets and corners. It is attention to such details (in these cases, to promote and define pedestrian-friendly streets) showed the importance of using graphics to achieve ends that are not easily defined by text. In his summation, he made the point that it is best to keep plans simple and to adjust your "rules" to your staffing capabilities. In other words, use highly prescriptive and precise standards if your staff does not have the expertise, time, or money to employ discretionary review practices.

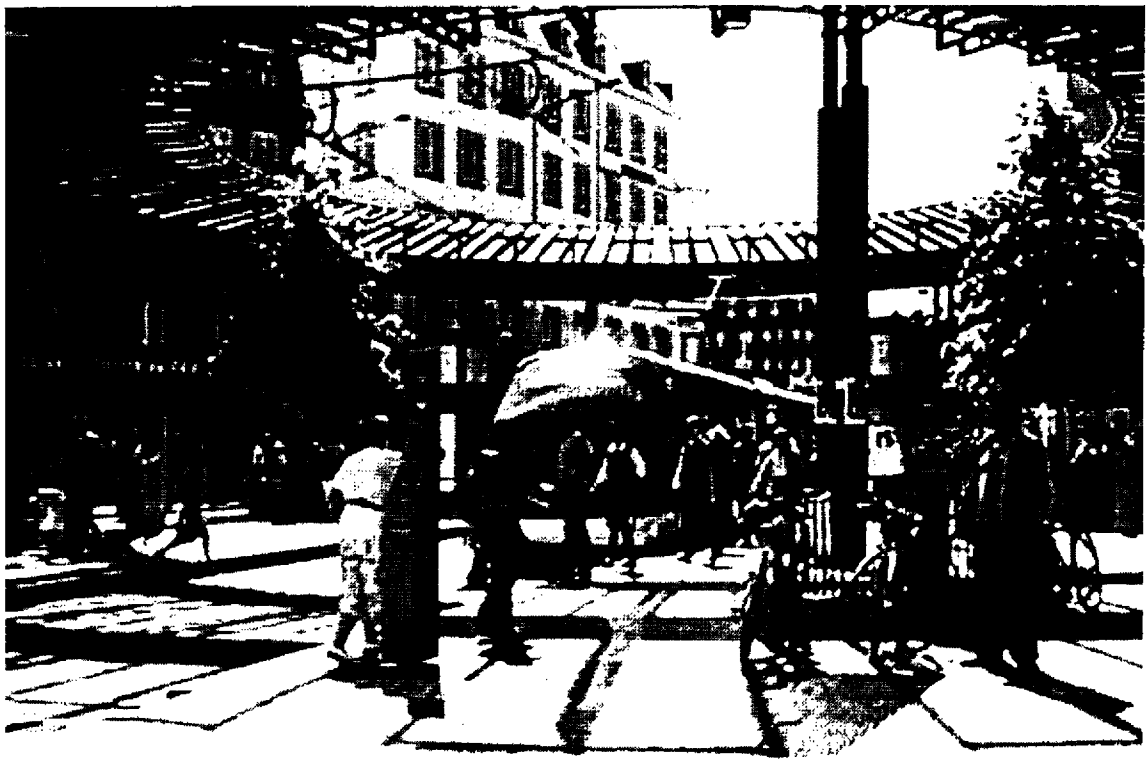
Con Howe, director of planning in Los Angeles, discussed the "unzoning" of the city. In general, he believes that the regulatory nature of zoning has led planners to be regulators rather than "instigators." Building on Park's comments, he noted that zoning regulatory systems are too costly and time consuming in a time when public budgets are severely strained, and he sees this continuing over the long term. Like Parks's note that much of traditional urban design would be nonconforming under today's standards, Howe noted that zoning is, in fact, an impediment to reaching planning goals. He emphasized that prescriptive zoning may be useless in a weak market. Because zoning may be a planner's strongest tool, the only way to make it

less of an impediment may be to undo it. In line with his vision of zoning, Los Angeles is removing regulations to achieve its ends, which, he notes paradoxically, is a form of incentive zoning.

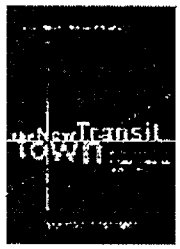
Howe described how Los Angeles is using Transit-Oriented Development (TOD), adaptive reuse, and retrofitting commercial corridors to undo zoning. In TODs, the city is giving a by-right 35 percent zoning bonus for buildings within 1,500 feet of a transit station or transit corridor. That bonus is also employed as a social equity tool inasmuch as it must be set aside for affordable housing. In a series of slides, he showed how adaptive reuse is employed as a "get out of zoning free" card. The adaptive reuse provisions remove restrictions from the reuse of buildings (he showed several large 1960s office buildings being converted to housing). In an effort to rebuild commercial corridors, the city has removed most requirements for housing and mixed-use projects developed in these mapped areas.

In all these instances, the by-right provision removes the review responsibility. It seems that this would be a kind of "market-based" zoning, providing incentives to developers without a strongly prescriptive review process. He reiterated that staff ability, size, and time commitments must be taken into account when developing plans and the zoning to implement them. A match between the two will facilitate the accomplishment of the ends of a plan through zoning.





TRANSIT ORIENTED DEVELOPMENT is the exciting new fast growing trend in creating vibrant, livable communities. Also known as Transit Oriented Design, or TOD, it is the creation of compact, walkable communities centered around high quality train systems. This makes it possible to live a higher quality life without complete dependence on a car for mobility and survival.



Hot off the press!

FACTORS DRIVING THE TREND

-Rapidly growing, mind-numbing traffic congestion nation-wide
-Growing distaste for suburbia and fry-pit strip development
-Growing desire for quality urban lifestyle
-Growing desire for more walkable lifestyles away from traffic
-Changes in family structures: more singles, empty-nesters, etc

-Growing national support for Smart Growth
-New focus of Federal policy

"Traffic congestion has increased so much in virtually every metropolitan area that two-hour commutes now are routine. Attempts to alleviate the problem by constructing more highways almost always have led to more sprawl and, eventually, m congestion." -Jim Miara

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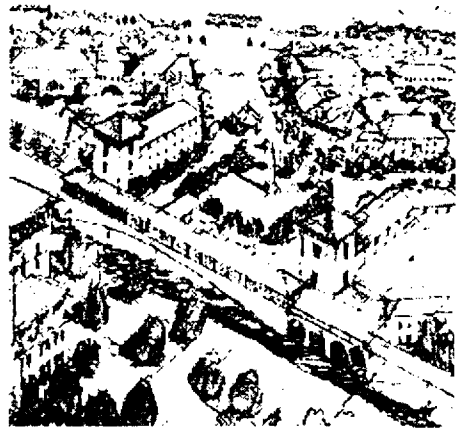
"Transit Oriented Development as an approach to combat traffic congestion and protect the environment has ca on all across the country. The trick for real estate developers has always been identifying the hot transit systen Today, highways are out; urban transit systems are in." -The Urban Land Institute (ULI)

COMPONENTS OF TRANSIT ORIENTED DESIGN



-Walkable design with pedestrian as the highest priority
-Train station as prominent feature of town center
-A regional node containing a mixture of uses in close proximity including office, residential, retail, and civic uses
-High density, high-quality development within 10-minute walk circle surrounding train station
-Collector support transit systems including trolleys, streetcars, light rail, and buses, etc
-Designed to include the easy use of bicycles, scooters, and rollerblades as daily support transportation systems
-Reduced and managed parking inside 10-minute walk circle around town center / train station

BENEFITS

-Higher quality of life
-Better places to live, work, and play
-Greater mobility with ease of moving around
-Increased transit ridership
-Reduced traffic congestion and driving
-Reduced car accidents and injuries
-Reduced household spending on transportation, resulting in more affordable housing
-Healthier lifestyle with more walking, and less stress
-Higher, more stable property values
-Increased foot traffic and customers for area businesses
-Greatly reduced dependence on foreign oil
-Greatly reduced pollution and environmental destruction
-Reduced incentive to sprawl, increased incentive for compact development
-Less expensive than building roads and sprawl
-Enhanced ability to maintain economic competitiveness

-Transit investment has double the economic benefit to a city than does highway investment.
-Transit can enable a city to use market forces to increase densities near stations, where most services are loc thus creating more efficient subcenters and minimizing sprawl.
-Transit enables a city to be more corridor-oriented, making it easier to provide infrastructure.
-Transit enhances the overall economic efficiency of a city; denser cities with less car use and more transit use a lower proportion of their gross regional product or wealth on passenger transportation. - *Taken from Sustaine and Cities, by Newman & Kenworthy*

"A New Train network is the most effective way to curb sprawl, and goes hand in hand with smart growth, creati livable communities, economic sustainability, environmental protection, human rights, and sustainable commun design. When planned together with compact, walkable forms of development, trains solve many serious proble facing society." -www.NewUrbanism.org

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Working Draft

City of Rockville
Zoning Ordinance Revision
Issue Paper

Sidewalk Standards

INTRODUCTION

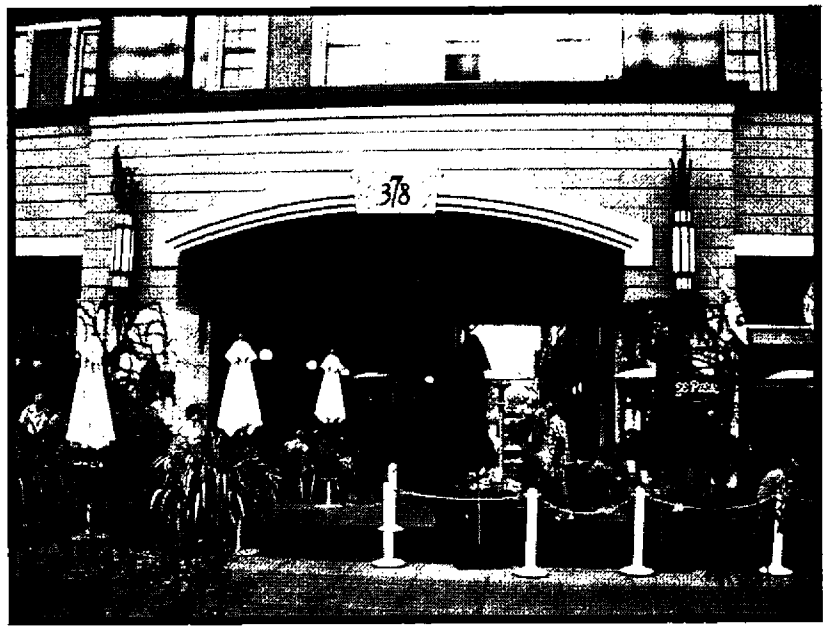
Recent discussions about mixed-use developments have indicated that the Mayor and Council and Planning Commission have concerns that the minimum sidewalk widths are smaller than desired. The basic focus of this discussion is the sidewalk standard for the Business District street, which comprises most of the streets in the Town Center and the Rockville Pike Corridor. This issue paper provides background information and recommended standards to balance the various elements that typically are found between the street curb and buildings.

This issue paper includes discussions on the general intent of sidewalks in a mixed-use areas, sidewalk design principles, amendment procedures, authority to establish sidewalk widths, and recommendations.

GENERAL INTENT

In planning a sidewalk system for an area, the balance between maximizing pedestrian capacity/walking speeds and creating an experience must be evaluated. In areas near an entrance to stadiums, amusement parks and tourist areas, very wide, unobstructed sidewalks are needed to move large volumes of pedestrians at a relatively high speed. In outdoor shopping areas and main streets the goal is to provide opportunities for interaction with other people, window shopping, outdoor seating, landscaping as well as provide access. In short, a sidewalk on a mixed-use, shopping street is designed to provide access and ambiance.

People on sidewalks in mixed-use areas are encouraged to move at a slightly slower speed and enjoy the experience of strolling in an interesting, multi-layered environment. A person who is walking along a street trying to decide which outdoor café to eat at is seeking a different pedestrian experience than someone hurrying from their car to a discount big-box store.



Via at Santana Row, San Jose, CA

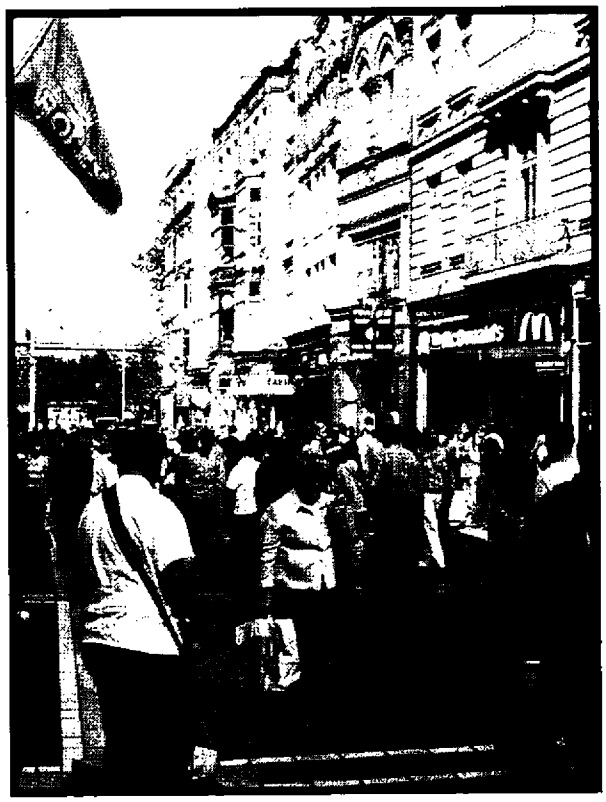
Sidewalks in a mixed use environment, like nature, abhor a vacuum. Space that isn't

actively used by pedestrians tends to get filled (or feel like it should be filled) by benches, restaurant seating, trees, landscaping, kiosks, art, signage, bus stops, newspaper racks, trash cans, etc. When this is done effectively, it creates a very popular environment (see above photo of Santana Row). When there is insufficient pedestrian activity or financial support to provide these amenities/activities and create a comfortable environment, a barren sidewalk is the result (see the below photo of North Market Street in San Jose, California). *Creating a Vibrant City Center* (see Attachment 11 – page 84) recommends 20-foot wide sidewalks along pedestrian spines and primary connectors in major cities. However it recommends that sidewalks that are more than 14 to 16 feet wide secondary connectors or streets in smaller cities "can dilute the sense of vitality and activity in the core."

30-foot wide sidewalk in San Jose, CA

The relationship between driving lanes, on-street parking, sidewalks, and the retail buildings is extremely important. A number of mixed-use developments have been constructed in recent years that carefully evaluated these relationships to create special places to serve as destinations for people. Whether new or old, if done poorly, they feel like strip shopping center. If done well, they become one of a community's favorite destinations.

People drive past other stores where they can get the same goods and services to go to places like Santana Row, Bethesda Row, and Mizner Park because of the place that they experience. This experience is a combination of the shops, restaurants, landscaping, design of the buildings and storefronts, and the hustle-and-bustle of an urban environment. People often go to these places and decide what to do when they get there rather than just going to a store or a restaurant as the sole destination.



Pedestrian-Only Street: Grafton Street, Dublin, Ireland

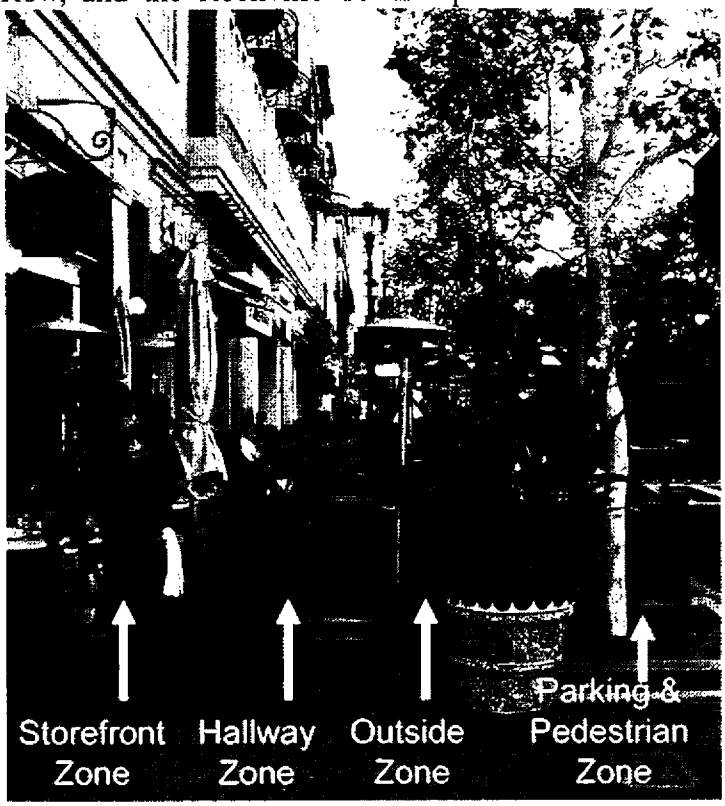
When a shopping street is so popular that pedestrian volumes overwhelm the street cars can be prohibited or restricted. Grafton Street in Dublin (see photo on previous page) and Rue Clare in Paris are two organically-developed pedestrian streets.

Construction of a new pedestrian-only street where retail and restaurants can thrive is extremely difficult to achieve. Although it was frequently tried in the 1970s, most of these streets now allow vehicles. The successful exceptions have been when the pedestrian-only street is located on an extremely high-volume pedestrian path serving a pedestrian destination like a university or tourist area. The retail shops along the walkway to the Metro bridge across Rockville Pike is the closest example of a pedestrian only area. These shops rely primarily on lunchtime trade supplemented by breakfast and people heading home from work, but have very little evening business.

SIDEWALK DESIGN PRINCIPLES

The *Sidewalk Standards Survey* (Attachment 1) identified the overall width of sidewalk areas that are recommended as general design principle and in specific locations. An essential element in developing sidewalk standards is determining how much distance is needed for each of the various functions along the length of a sidewalk.

A number of principles have developed over time based on the analysis of human behavior in shopping environments. Two of these approaches will be discussed to provide insight to the appropriate widths for each function to achieve the overall goal of a successful mixed-use street. The S.H.O.P. Model was developed by Street-Works and applied in the design of mixed-use streets such as Bethesda Row, Santana Row, and the Rockville Town Square. The second approach is a staff summary of the design principles observed in enclosed shopping malls to illustrate how the design and management of pedestrian areas responds to/influences shopper & pedestrian behavior.



S.H.O.P. Model

In the preparation of the design for the Town Square development, Street - Works summarized their S.H.O.P. Model. S.H.O.P. stands for Storefront Zone, Hallway Zone, Outside Zone, and Parking/Pedestrian Zone. These four zones serve as the foundation for great retail streets where people go to be "somewhere" rather than just going to buy something.

Storefront Zone – designed to "maximize the exposure to the merchandise perpendicular to the flow of pedestrian traffic" and to create 'friction' (interest) along the storefront by extending the merchandise experience beyond the storefront". In the Town Square this area was referred to as the 2-foot wide storefront expansion zone. In many cities, restaurants may "spill out" onto the sidewalk in the Storefront Zone.

Hallway Zone – the walking portion of the sidewalk. "Cafes or property line issues shouldn't force the circulation anywhere but next to the storefront. Also, by making the pedestrian width slightly smaller than required will make the area seem busier. This zone should not be more than eight feet to achieve this effect."

Outside Zone – the "area between the walkway and the street curb, and should be considered as an 'outdoor' room. This 'room' should feature urban amenities such as cafes, kiosks, bicycle racks, benches, planters, and fountains. Great trees, however, are the most important element required here to provide a sense of enclosure, and make the space feel like a room." Often the width of the tree pit controls the width of the outside zone. As a result, the effective outside zone will vary along a street's length.

Parking/Pedestrian Zone – offers a "safe barrier between moving traffic and the meandering pedestrian." In the Town Square, one side of Newmarket Street fluctuates between the Outside zone and the Parking/Pedestrian Zone. In the Town Square development, these terms were called Storefront Expansion, Pedestrian, Tree/Amenity/Outdoor Café Seating, and Buffer. The following illustrates some of the standards that were adopted by the Mayor and Council as part of the Use Permit (USE2003-00670) (see attachment 10). The minimum total sidewalk width (excluding the Vias, Plaza and the curving sidewalk area next to the Library) ranges from 10 feet to 20 feet. The most constrained block (Beall Avenue between Maryland Avenue and MD 355) has a 2' storefront expansion zone, 8' pedestrian zone, no Tree/Amenity/Outdoor Café Seating Zone, and no buffer zone. Maryland Avenue has a 2' storefront expansion zone, 9' pedestrian zone, 7' Tree/Amenity/Outdoor Café Seating Zone and 2' buffer zone. These requirements balanced the function of the sidewalk and site constraints to achieve the goals that were desired for those areas.

The variety in sidewalk widths should add to the variety of these streets, rather than detract. As with any goal, there will be times in the future when another foot or five feet in any given location might be desirable to maximize a particular goal. However, urban environments, like most complicated systems, are unable to maximize every variable and still achieve the overall desired effect. The variety of urban spaces is one of the elements that sets successful downtowns apart from sterile, corporate office parks or strip shopping centers where every street, sidewalk, street tree, sign, and building looks exactly the same.

Lessons Learned From Shopping Malls

The design and management of a shopping mall are geared toward creating a pleasurable shopping experience. The success of shopping malls, from an economic perspective, is linked to their ability to create a comfortable environment. Given the nearly-complete control that a

shopping mall manager has over the design of the pedestrian space, the lessons have particular relevance in evaluating the appropriateness of sidewalk designs.

Very little in the design of the pedestrian areas in an enclosed shopping mall is left to chance. Successful shopping mall managers are constantly fine-tuning the pedestrian environment throughout the mall to encourage shoppers to stay longer and spend more money. The more successful stores also fine-tune the pedestrian environment every time they adjust their displays.

There is a hierarchy of pedestrian spaces in a mall that can be helpful in understanding how pedestrian spaces on city streets function. Most malls have pedestrian areas that can be called gateways, main streets, and plazas. Each type of space has different physical characteristics that balance the number and speed of pedestrians with the adjacent uses.

1. ***Gateways*** – are areas where people enter the mall from the parking lots/garages but do not go directly into one of the anchor stores. These spaces are designed to be the widest pathways in a mall to accommodate high volumes of people at the highest walking speed when there are no stores located near the entrance.

   Sometimes the walkway will have potted plants, kiosks, fountains, displays, etc. to fill the space if the pedestrians don't. Many grand entrances utilize the architectural techniques of compression and expansion as part of the transition from inside to outside. Compression is achieved through the use of shorter ceilings and entrances slightly narrower than the inside of the mall. Expansion is achieved through larger spaces. This technique is used in the Vias in the Town Square development.

2. ***Main Streets*** – are along the main spines of the mall or a department store. Montgomery Mall has main streets that are approximately 30 to 45 feet wide between storefronts with a lot of variety. The middle of the space is often occupied by seating, kiosks, landscaping, displays, information booths, etc. These uses help maintain a comfortable (and interesting) pedestrian environment while retaining 8 to 13 feet for unobstructed pedestrian travel adjacent to the store windows. Above the ground floor, the middle of the space is open to the ground floor. The width of the walking area allows for a mix of walking speeds (including people hanging out in the center, window shopping next to stores, people carrying bags, and people rushing to the movie theater).

   In a department store, this main street concept is narrower due to lower pedestrian volumes, direct accessibility to the merchandise, and the desire to slow down walking speeds to promote purchasing. These narrower widths (5-12 feet) can be comfortable because the merchandise racks are low enough to avoid the sense of enclosure.

   Regardless of location, the pedestrian areas typically vary in usable width to provide variety and are made of different materials/patterns to help define paths. In addition, the lines of sight also vary to see partial vistas of the entire length of the mall, but to also have the views be varied and interrupted by pleasing intermediate vistas.

3. ***Plazas*** – The large plazas at the intersection of main spines of shopping malls have, over time, been broken into smaller "rooms" that are a comfortable scale while still providing a large open space.

The spaces in a mall are closely related to those on city streets. There are two inherent differences. The first is the relationship between ceiling heights and walkway widths – walkways in a mall need to be wider than outside to maintain a sense of openness (due to the ceiling) and to accommodate a greater proportion of pedestrians that are carrying bags. The second is the lack of a street between the sidewalks results in the pathway in a mall needing to be equal or greater than the combined sidewalk width on a street that otherwise has the same land uses and pedestrian volumes.

The basic principles that can be transferred from shopping malls to mixed-use city streets include

1. Provide adequately sized unobstructed pedestrian pathways to accommodate window shopping and through traffic,
2. Vary pathway widths on a frequent and irregular basis to provide visual interest and to adjust to pedestrian volumes,
3. Activate wide areas by secondary uses (kiosks, restaurant seating, gift wrapping, stroller rentals, etc.), landscaping, seating and art.

AUTHORITY TO ESTABLISH SIDEWALK WIDTHS

Minimum sidewalk widths are established through a variety of mechanisms in the City of Rockville. Attachments 2 through 8 contain the various sidewalk widths required in the City. The fundamental basis for the City's ability to require private developers to construct sidewalks in the public right-of-way stems from the Subdivision Regulations and the various development approval process requirements for conformance with the relevant master plan. In cases where the relevant master plan contains no guidance, Chapter 21 of the City Code, Street and Public Improvements specifies the sidewalk width for each class of street. The 1994 *Synthesis of Pedestrian Policies* also provides a summary of the sidewalk policies in effect at the time.

During an individual development application review, staff works with the applicant to determine the appropriate sidewalk width based on the various requirements. As a result, there are instances where a wider sidewalk is achieved as a result of negotiation rather than a strict requirement contained in the ordinance or master plan. There are cases, like the Town Square development, where the applicant and the City both sought to achieve what will be referred to as "placemaking goals". Placemaking goals include the desire to have an active streetlife characterized by outdoor seating for restaurants, outdoor display areas, pedestrian-oriented signage, street trees, and other techniques of improving the appearance of the sidewalk area. In instances like this, the increased sidewalk width requirements were developed out of mutually-shared goals and not simply required by the City. In the absence of adopted standards that address the multiple issues that are interrelated to sidewalk width, sidewalk widths above the adopted minimums will be as a result of case-by-case negotiations.

The Streets and Public Improvements Chapter permits the granting of waivers from the standards. Waivers were granted in the approval of the King Farm and Fallsgrove comprehensive planned developments CPDs and in various planned residential unit developments (PRUs). The location of the sidewalk (against the curb or with a planting strip), material, and tree pit dimensions are factored in the recommendation to the approving body.

AMENDMENT PROCEDURES

The basic focus of this discussion is the sidewalk standard for the Business District street, which comprises most of the streets in the Town Center and the Rockville Pike Corridor. Standards for Rockville Pike also are included in Attachment 6. In addition, the Bikeway Master Plan also makes recommendations for shared-use paths that serve as sidewalks. The existing standards for sidewalk widths for various streets are contained in the various attachments.

If the changes increase the required right-of-way or sidewalk standards, then appropriate documents will need to be amended. The amendment procedure for each of these documents varies and the following lists the documents from least to most time intensive procedural processes.

- The *Standards and Details for Construction* is approved by the Department of Public Works,
- The *Streets and Public Improvements* Chapter of the City Code is changed by an ordinance amendment,
- The *Zoning Ordinance* requires a text amendment to change provisions,
- Master plans require a master plan amendment process.

RECOMMENDATIONS

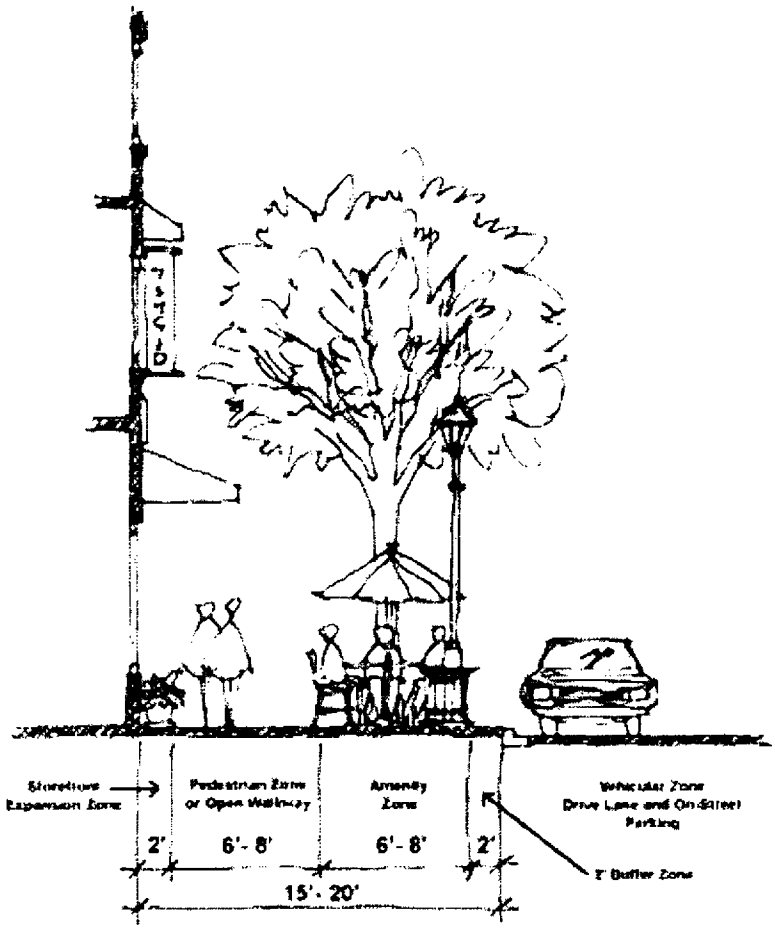
As shown in the Sidewalk Survey (Attachment 1), there are minimum standards for basic sidewalks such as the American with Disabilities Act (ADA). The ADA standards are 4-feet wide to allow use by one wheelchair and 5-feet wide to allow two wheelchairs to pass. This minimum standard is intended to be used for relatively low volume sidewalks. The City's standards exceed these minimum standards and are shown in Attachments 2 through 9. Although the City exceeds minimum standards, it is appropriate to tailor the sidewalk width to the situation. Wider sidewalks are appropriate in mixed-use areas and other locations where high pedestrian volumes are expected.

As staff evaluates revisions to sidewalk standards we recommend establishing minimum standards for each of the functional areas of the sidewalk. The result is that some sidewalks may vary in width based on the uses. For instance, on a sidewalk with no café seating, the Outside Zone may only be wide enough to accommodate street lights, parking meters, signage, etc. or may just have a continuous tree planting strip. If café seating is desired, the Outside Zone may be between 6 and 12-feet wide depending on space limitation and the desired seating capacity. There may be cases where no storefront zone is desired. As a result, there may be cases where

the total sidewalk width may vary along a block like older cities and in many of the new, successful mixed-use streets.

Staff recommends that the development of standards be incorporated into the Zoning Ordinance revision. As part of that effort, staff recommends developing standards for the different street classifications and/or locations for the following elements of a sidewalk in a mixed-use area:

1. minimum width of unobstructed pedestrian zone,
2. minimum width of tree panel or tree planting opening and/or amenity zone,
3. maximum storefront expansion zone when a sidewalk is on private property in a public access easement,
4. where a public utilities easement (PUE) can be located under a sidewalk as well as the minimum width and depth,
5. minimum separation between sidewalk and underground portions of a building or parking garage built below a sidewalk (on private property),
6. whether the City should formalize licensing procedures for use of sidewalks for outdoor seating associated with restaurants,
7. instances where rights-of-way can be narrowed to allow private ownership of the sidewalk (with appropriate easements) to simplify use of sidewalks for restaurant seating,
8. conditions to grant adjustments.



The minimum standards for various sidewalk elements are summarized in the following table:

Minimum Width of Sidewalk Elements[1]					
Condition\Zone	**Storefront Expansion**	**Pedestrian**	**Tree/Amenity/ Outdoor Seating[2]**	**Buffer[3]**	**Total**
Business District Street with Ground Floor Retail	*to be filled in at a later date.*				
Business District Street without Ground Floor Retail		*to be filled in at a later date.*			
Maryland Avenue (North of Beall) with Ground Floor Retail			*to be filled in at a later date.*		
Rockville Pike				*to be filled in at a later date.*	
Other Streets (if needed)					*to be filled in at a later date.*

Notes:
[1] Minimum widths may be waived by the approving body for short portions of a sidewalk.
[2] Trees are required but other elements may be optional depending on the location.
[3] May be part of the Tree/Amenity/Outdoor Seating Element

CONCLUSION

The success of countless city neighborhoods like Adams Morgan, Old Town Alexandria, Annapolis, and Georgetown are not because of free parking, convenient parking, uniform signage, uniform architecture, uniform width sidewalks, uniform paving materials, and strict uniform controls on what can happen on the sidewalk, etc. Although deviating from the uniform standards (too numerous too list) that most jurisdictions have in place, these places are enjoyed rather than simply tolerated. All of these city neighborhoods and some of the recently created places followed design principles based on personal interaction and relationships rather than capacity issues.

Design principles based on personal interaction and relationships seek to create physical spaces that people feel comfortable in. Shops that are too far from the street have no presence and are not noticed by drivers. Too much landscaping obscures the signs of the stores. Sidewalks that have no separation (parked cars or landscape buffer) from the street feel unsafe next to fast-moving cars. The exception to the above can be successful when they are located in richly-detailed urban environments. City neighborhoods like Alexandria, Annapolis, and many European city streets have no (or few) street trees and narrow sidewalks along the curb. Newer streets are less able to create desirable environments if the design elements discussed earlier are not provided.

If the changes in sidewalk standards increase the required right-of-way, the affected master plans will need to be changed. It may also require the creation of a new road classification to be placed into the Streets and Public Improvements Chapter of City Code. The amendment processes for these will require public outreach and the opportunity for public comment. The amendment should provide guidance with the ability to custom-tailor the various elements of a sidewalk to create the richly-varied urban spaces that are desired in the Town Center and other mixed-use areas in the City.

ATTACHMENTS:

1. September 7, 2004 Memo to Catherine Tuck Parrish on Sidewalk Standards Survey
2. Excerpts from the *Zoning Ordinance*
3. Excerpts from the *Street and Public Improvements* Chapter
4. Business District Road Standard Cross Section
5. *Town Center Master Plan* Street Section for Maryland Avenue and North Washington Street
6. *Rockville Pike Corridor Neighborhood Plan* Excerpts for Various Roads
7. *East Rockville Neighborhood Plan* discussion of sidewalk widths for North and South Stonestreet Avenue
8. *Bikeway Master Plan* Excerpts
9. *Synthesis of Pedestrian Policies* Excerpts
10. Minimum Sidewalk Widths for Town Square
11. Pedestrian Realm Chapter of *Creating a Vibrant City Center*
12. *Dining Al Fresco Expected to Energize King Street* from the Washington Post

ATTACHMENT 1

City of Rockville

MEMORANDUM

September 7, 2004

To: Catherine Tuck Parrish
Acting City Manager

From: Robert J. Spalding, AICP
Chief of Planning

Subject: Sidewalk Standards Survey

To follow-up on Mayor and Council discussions about sidewalk widths, Randy Clay of the Planning staff conducted a brief survey of other jurisdictions and nationally-recognized standards. This survey will provide helpful comparisons with other jurisdictions in the consideration of sidewalk width standards.

An essential element of revising sidewalk width standards is the evaluation, and possible amendment of, right-of-way widths, minimum setbacks, standards for uses in and adjacent to sidewalks (including alcohol sales), and desired land uses along the street. In addition, the relationship between tree planting areas, public utility easements, storm drains, underground parking garages, and property lines must be evaluated. This is necessary to avoid unintended consequences from modified standards.

A few examples will illustrate the interrelationship of the various elements. If an 11-foot sidewalk is required by code for a four-lane road within a 70-foot right-of-way, the lanes comprise 48 feet and the sidewalks comprise 22 feet. Every foot that the sidewalk width is increased requires dedication of more land than required in the Master Plan and Streets and Public Improvements chapter.

If additional sidewalk width is permitted to be in a public improvement easement that permits full pedestrian access then the building setback has to be increased beyond the minimum setbacks permitted in the zone. Since an underground parking garage can still be built to the property line, the depth of the first level of parking becomes critical when evaluating the feasibility of public utility easements above the garage and tree planting areas. If sidewalk standards are substantially increased, a waiver provision should be considered to adapt to the unique circumstances of a particular case.

The staff work required to fully evaluate the impacts of potential changes and make a staff recommendation to the Planning Commission and the Mayor and Council is not currently included in the work programs of the Planning Division, Long-Range Planning Division, Traffic and Transportation Division, Engineering Division, Legal Department, and the Forestry Division. Typically, substantial changes in right-of-way requirements are conducted through a master plan amendment or a substantial revision in the Streets and Public Improvements chapter of the City Code. A Zoning Ordinance text amendment may also be required to supplement revisions to the Master Plan and the Streets and Public Improvements chapter. Because of the comprehensive approach required for possible changes, it would be appropriate for such an effort to be part of the comprehensive Zoning Ordinance revisions.

A comprehensive approach is necessary to ensure consistency between the Master Plan, Zoning Ordinance, Streets and Public Improvements chapter, and City policies. These are essential elements that residents, applicants, staff, the Planning Commission, and the Mayor and Council rely on for predictability and consistent application in the development review process.

cc: Art Chambers
Hal Cranor
Burt Hall
Sondra Block
Jim Wasilak
Larry Marcus
Susan Nolde
Wayne Noll
Randy Clay

Attachment

City of Rockville

MEMORANDUM

August 26, 2004

TO: Bob Spalding, Chief of Planning, AICP

FROM: Randy Clay, Planning Technician RC

SUBJECT: Sidewalk Design Standards

BACKGROUND

The Mayor and Council have raised concerns about appropriate sidewalk standards for the Town Center. Staff has conducted a survey of recommended sidewalk standards for mixed use commercial areas to provide background information for further consideration.

The survey includes recommended standards from nationally recognized experts such as the U.S. Dept. of Transportation, Walkable Communities, Inc. (Dan Burden), Duany Plater-Zyberk, The Institute of Transportation Engineers, and American Planning Association. The survey also includes standards from other urbanized commercial areas in California, Oregon, Virginia, Texas, Georgia, Massachusetts, Washington, and Washington, D.C.

The following table includes the results from individual sources:

Comparative Analysis of Sidewalk Standards

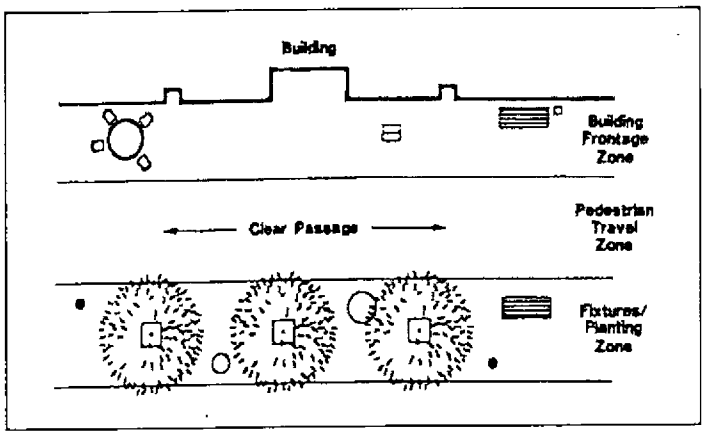
Developed Area Classification	Commercial and Mixed Use Areas/Major Pedestrian Corridors/Urban Core/Urban Center Business District/Transit Corridors/Downtowns/Town Centers
Pedestrian Travel Zone	
Desirable	8 ft to 37 ft
Minimum	5 ft to 6 ft
Street Edge/Sidewalk Zone	
Desirable	6 ft to 10 ft
Minimum	3 ft to 4 ft
Building Frontage Zone	
Desirable	6 ft to 10 ft
Minimum	5 in to 2 ft

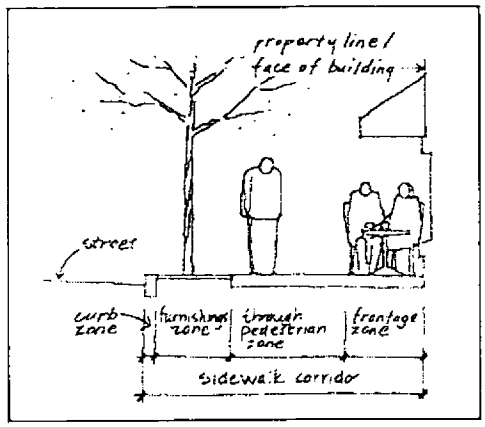
**Data for this study were compiled from guideline, ordinance, and report materials. A cross section of government agencies from eight states, research organizations, and various media publications comprise the source material used in the final analysis.*

This survey supplements the Streetscape Elements Survey (Fall 2003), which provided examples of both street and sidewalk dimensions in nearby urbanized areas. A copy of this survey is attached and includes new material from this study.

SUMMARY OF FINDINGS

The below figures illustrate the concepts of passive and active space incorporated into the design of sidewalk facilities. By applying three separate zones, areas are created for pedestrian travel, rest, and socializing activities.





Sources: *Pedestrian Facilities Guidebook*, Washington State. *Portland Pedestrian Design Guide*, Portland, Oregon.

The study uses an urban classification system to group standards based on the type of uses supported by the streetscape. The findings reflect the need to separate public sidewalks into functional spaces as they relate to three independent zones. These will be referred to as the pedestrian zone, the street edge and sidewalk buffer zone, and building face zone. The attached table details the standards identified by design experts and in various urban areas.

The widths of sidewalks in mixed use urban areas between the curb and building face range from 8 feet to 37 feet. However, most are between 10 and 20 feet. For the unobstructed walkway, most pedestrian zones range from 6 to12 feet. The majority of zones buffering these walkways from roadway range from 4 to 6 feet. Additionally, space directly fronting a building edge can range anywhere from 5 inches to10 feet depending on need. Collectively, these figures describe standards for an overall range between 10 ½ to 28 feet be used in design of sidewalk facilities in urban areas with a more common range yielding between 10 and 20 feet as mentioned above.

A brief description of each zone follows:

PEDESTRIAN ZONE

A pedestrian zone acts as the exclusive walkway space for unobstructed travel and serves the mobility needs of users. At the very minimum, widths of 4 to 6 feet were recommended in the

study and reflect 34% of sources surveyed. Sidewalk widths of a minimum 5 feet were cited as necessary to accommodate the travel of two people walking side-by-side. In most accounts, where pedestrian activity is more intense, the need to establish even wider standards is noted. A range of 8 feet to 20 feet reflects this need among more intense urban land uses and accounts for 61% of urban areas in the study. There were also two outlier figures of 30 and 37 foot sidewalk widths. Total sidewalk widths below 8 feet are typically outside of major mixed-use commercial areas and are included for reference.

STREET EDGE & SIDEWALK BUFFER ZONE

The street edge and sidewalk buffer zone serves to create a barrier between roadways and pedestrian traffic. Passive activity areas may be carved from these areas providing opportunities for rest as well. Based on minimum and desirable width figures, 76% of the survey recommend allocating four to six feet of public space to this treatment. Benefits sited for its inclusion range from providing a higher level of comfort for pedestrians to sighting of pedestrian obstructions such as light poles, road signage, and bus shelters. These spaces are also mentioned as ideal for snow storage as well as aid in the prevention of pedestrians being splashed with elements within roadways.

BUILDING FRONTAGE ZONE

A building frontage zone allows the opportunity to project expressions of retail uses beyond the building face and into the public realm. The survey reflects a growing focus on the separation of this area. Two interesting standards emerge. First, a minimum width of 5 inches to 2 feet can be used to achieve the purpose of the zone. Second, where it is desired, these widths can range from 6 to10 feet. These dimensions would be utilized for the location of outdoor cafes or vending operations. Examples are illustrated in the accompanying attachment.

Further, the survey alludes to the flexibility built into the placement of each zone. A hierarchal balance within these public spaces is achieved through the location of each zone in the most ideal right-of-way. This characteristic allows streetscape design to adapt to the many constraints imposed upon specific sights. The recommended ranges between minimum and desirable standards for each zone further reinforce this trait found throughout the survey.

Attachment: Sidewalk Standards Survey
Attachment: Streetscape Elements Survey

SIDEWALK STANDARDS SURVEY

SOURCE	Condition/Area/Street Type	Pedestrian Travel Zone Exclusive Pedestrian Travel Way		Street Edge/Sidewalk Buffer Zone Utility Fixtures/Planting/Furniture		Building Face Zone Outdoor Seating/Retail Expressions		Combined Standard		Illustration/ Figure
		Minimum	Desirable	Minimum	Desirable	Minimum	Desirable	Minimum	Desirable	
Americans with Disabilities Act	Minimum clear passage-one wheelchair	4 ft						4 ft		
DeChiara and Koppleman-proportional width to projected user volume	Minimum sidewalk width for two way traffic	4 ft	6 ft					4 ft	6 ft	
Utah League of Cities and Towns- Town of Eagle Mountain, Utah	Areas other than retail, service commercial, and mixed use	4 ft						4 ft		
Dom Nozzi-Merits and Principals of New Urbanism	Minimum width for unobstructed walkway	5 ft						5 ft		7
Americans with Disabilities Act	Minimum clear passage-two wheelchair	5 ft						5 ft		7
Dan Burden- Walkable Communities, Inc.	Minimum requirement for two people walking side-by-side	5 ft	6 ft					5 ft	6 ft	3
Colorado Springs, Colorado Mixed Use Development Design Manual	Minimum width-mixed use development	6 ft						6 ft		13
Arlington County, Virginia	Minimum width in low density single family n'hoods	4 ft		2.5 ft	4 ft			6.5 ft	8 ft	
Arlington County, Virginia- Walk Arlington	Minimum width in medium density townhouse and small commercial areas	6 ft		2.5 ft	4 ft			8.5 ft	10 ft	
U.S. Department of Transportation (FHWA)	Local or collector streets- clear unobstructed width	5 ft		2 ft	4 ft			7 ft	9 ft	
Puyallup, Washington	Minimum width- commercial areas	8 ft						8 ft		
U.S. Department of Transportation (FHWA)	Along parks, schools, and other major pedestrian generators	8 ft	10 ft					8 ft	10 ft	2
Dan Burden- Walkable Communities, Inc.	High pedestrian volumes in commercial and school districts	8 ft	12 ft	4 ft	6 ft			8 ft	12 ft	
Albemarle County, Virginia	Minimum width-commercial areas	9 ft						9 ft		
Sacramento, California Transportation & Air Quality Collaborative	Mixed retail/office/multifamily	9 ft						9 ft		
The Institute of Transportation Engineers (ITE)	Minimum width for unobstructed walkway	5 ft		4 ft	6 ft			9 ft	11 ft	
Utah League of Cities and Towns- Town of Eagle Mountain, Utah	Retail and service commercial and mixed use areas	10 ft						10 ft		
Portland, Oregon Pedestrian Design Guide	Recommended configuration of sidewalk corridor where street ROW is < 50'	5 ft		4 ft		.5 ft		10 ft		17,18
U.S. Department of Transportation (FHWA)	Arterial or major streets-clear unobstructed width	6 ft		4 ft	5 ft			10 ft	14 ft	
Washington State: Pedestrian Facilities Guidebook	Minimum width-urban center/business district (principal/minor arterials: 64ft to 100ft)	6 ft	10 ft	3 ft	10 ft	2 ft	10 ft	10 ft	15 ft	17
Dutchess Land Conservancy, Inc.- New York	Minimum width-commercial areas	6 ft		4 ft	10 ft			10 ft	16 ft	
Annapolis, Maryland-Street Tree Plan	Minimum sidewalk for urban areas	8 ft		2 ft				10 ft		
Portland, Oregon Pedestrian Design Guide	Recommended configuration of sidewalk corridor where street ROW is 50'	6 ft		4ft		.5 ft		11 ft		18
Local Government Commission	Street design connecting town centres and neighborhoods- 82 ft ROW	5	8	6				11	14	17
Anton Nelessen-sliding scale for width based on numbers of travelers	Minimum width for four (4) people walking side by side	11.6 ft						11.6 ft		16
Rockville Town Center Design Guidelines	**Newmarket Street- west side (formerly Market St.)**	12ft						12 ft		19
Portland, Oregon Pedestrian Design Guide	Recommended configuration of sidewalk corridor where street ROW is 60'	6ft		4 ft		1 ft	6 ft	12 ft		18
Rockville Town Center Master Plan	**North Washington Street walk**	12 ft	15 ft					12 ft	15 ft	19
City of SeaTac, Washington	Streets designated as major pedestrian corridors	12 ft	16 ft					12 ft	16 ft	
U.S. Department of Transportation (FHWA)	CBD areas	8 ft	12 ft	4 ft	6 ft			12 ft	18 ft	
Duany Plater-Zybark SmartCode- T5 Urban Center/ T6 Urban Core Zone	Standard street/avenue/boulevard	6 ft	16 ft	4 ft (continuous strip)	6 ft			12 ft	22 ft	
Duany Plater-Zybark SmartCode- T5 Urban Center/ T6 Urban Core Zone	Commercial street/avenue/boulevard	12 ft	24 ft	4 ft	6 ft			12 ft	24 ft	
Anton Nelessen-sliding scale for width based on numbers of travelers	Minimum width for five (5) people walking side by side	13 ft						13 ft		
Arlington County, Virginia- Walk Arlington	Minimum width in high density County Metro corridors (mixed-use/commercial areas)	10 ft		4 ft	6 ft			14 ft	16 ft	
Smart Growth Network-Reid Ewing	Minimum width for two couples passing-high volume location	10 ft		2.5 ft		1.5 ft		14 ft		
Washington, District of Columbia- Downtown Streetscape Reg.	Minimum widths for pedestrian movement and street tree planting-Downtown BID	10 ft		4 ft				14 ft		
Local Government Commission	Street design providing access and space for n'hood commercial and mixed- 58 ft RO	8		6				14 ft		17
Midtown Alliance- City of Atlanta, Georgia	Minimum sidewalk width	10 ft		5ft				15 ft		
American Planning Association- Jim Schulz and Kelly Kline	Width to accommodate flexible retail space patios or outdoor dinning	15 ft						15 ft		
Portland, Oregon Pedestrian Design Guide	Recommended configuration of sidewalk corridor where street ROW is 80'	8 ft		4ft		2 ft	6 ft	15 ft		18
Rockville Town Center Design Guidelines	**Newmarket Street- east side (formerly Market St.)**	15 ft						15 ft		19
Rockville Town Center Design Guidelines	**North Washington Street walk- east side**	8 ft		7ft				15 ft		19
Albemarle County, Virginia	Minimum width- higher density commercial areas	15 ft	18 ft					15 ft	18 ft	16
Rockville Town Center Design Guidelines	**Maryland Avenue- (both sides)**	10 ft		8ft				18 ft		19
Rockville Town Center Master Plan	**Maryland Ave. pedestrian zone with sidewalk (west side)**	12 ft	16 ft	8ft				18 ft	21 ft	19
K Street, Washington, D.C.	Sidewalk widths to handle transit off-loading and commercial activity	20 ft						20 ft		
Dan Burden- Walkable Communities, Inc.	Large successful downtowns (not defined)	20	30 ft	4 ft	6 ft			20 ft	30 ft	9,12
San Jose, Texas	Downtown pedestrian retail environment	20 ft						20 ft		
Rockville Town Center Master Plan	**Maryland Ave. pedestrian zone with sidewalk (east side)**	15 ft		6 ft				21 ft		19
Downtown Silver Spring, Silver Spring, Maryland	Ellsworth Dr. between Fenton St. and Georgia Ave.	5 ft		8 ft		10 ft		21 ft		18
Bethesda Row, Bethesda Maryland	Woodmount Ave. between Bethesda Ave. and Elm St.	5 ft		7.2 ft		10 ft		22.2 ft		6
Pennsylvania Avenue, Washington, D.C.	Sidewalk widths to handle tour bus operations	30 ft						30 ft		
South Boston, Massachusetts- Midway Street Project	Grand boulevard width- shops, cafes, and high pedestrian traffic	37 ft						37 ft		

Other Standards:

Dan Burden- Walkable Communities, Inc.	Highly successful downtowns (not defined)	50/50 ratio of sidewalk to street	4 ft	6 ft	50/50 ratio of sidewalk to street
American Institute of Architects	Street standard proportional to building size for an enclosed and intimate scale	1:3 building height to street width (3 increments of street/sidewalk width for every 1 increment of building height)			1:3 building height to street width

SOURCE: Data for this study were compiled from guidelins, ordinance, and report materials.
A cross section of government agencies from eight states, research organizations,
and various media publications comprise the source material used in the final analysis.

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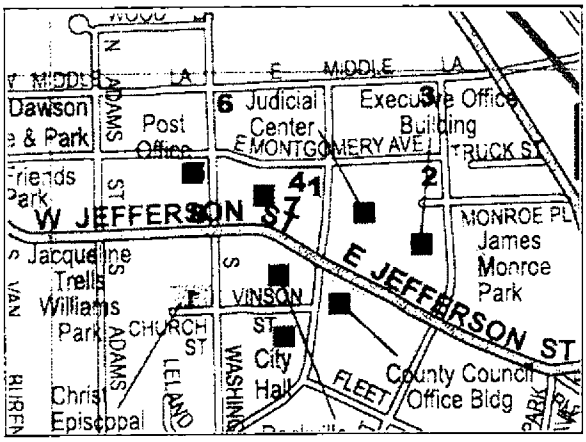
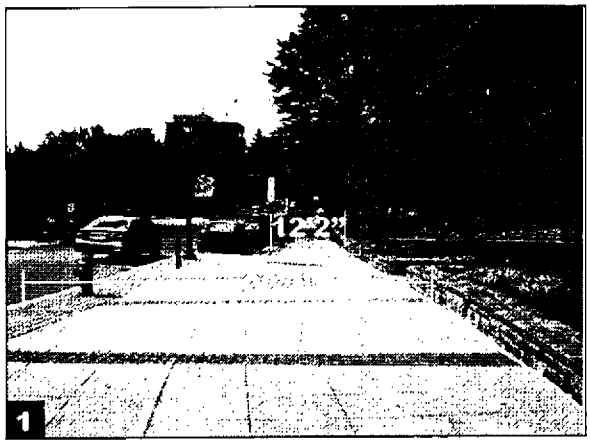
Introduction

The designs of streetscapes for urbanized areas reflect how elements of development character and context influence both the shape and creation of the built environment. Varying conditions have the effect of producing myriad patterns, which can be seen and experienced in urban streetscapes today. Upon entering a space, there is a certain identity translated to the individual through the use and organization of elements within the area. To advance this, jurisdictions can create guiding principals for urban design that can then be applied to how development achieves the type of environments stakeholders envision. This appendix is provided to facilitate a visual study of the differences and similarities found throughout the design of streetscapes in the Washington Metropolitan Region. Specifically, existing and built conditions are provided to help visualize how some streetscape elements are utilized in both public and private development. This will provide a better understanding of future plans as they are created and shared. Quantitative data were gathered using both curb face-to-block face and curb face-to-sidewalk edge measurement techniques. In some cases, approximations of square footage also are provided for interpretation of space dimensions. Please note also that in some instances measurements throughout an entire element will vary slightly from the source of measurement based on variable construction standards and conditions.

Rockville Town Center, Rockville, Maryland

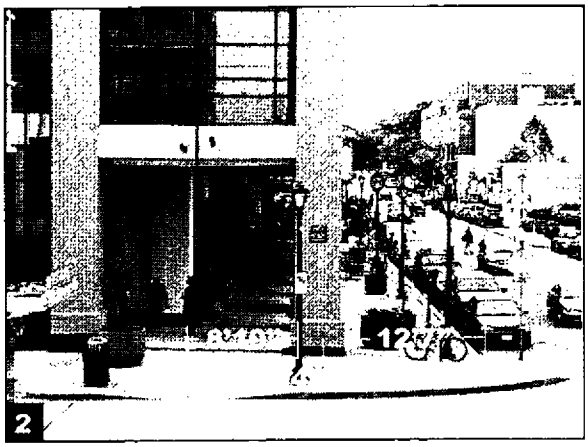
Streetscape Elements





E. Montgomery Ave. & Maryland Ave.
Walkway: 22'2"
Narrowest Walkway: 12'2"

Monroe St. & E. Middle Ln.
Planting Area: 5'0"
Walkway: 9'0"

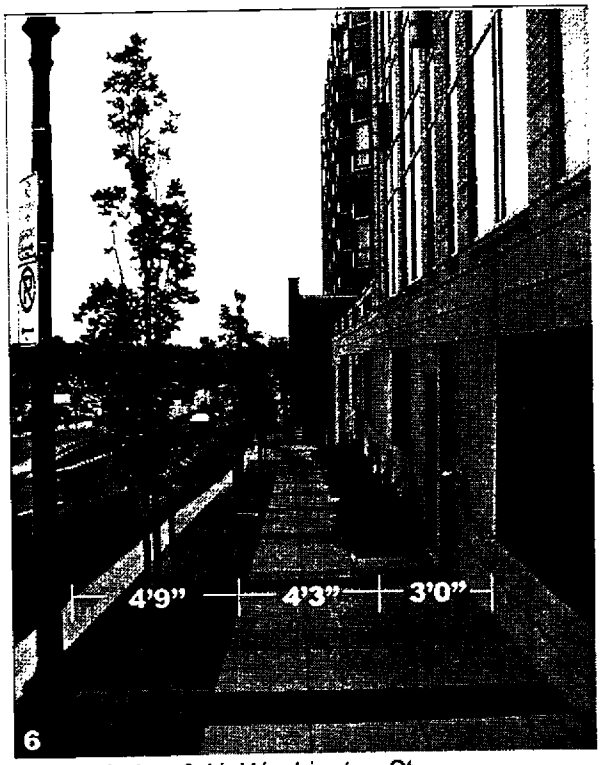


Courthouse Square & Monroe St.
Interior Walkway: 8'10"
Column Width: 4'5"
Exterior Walkway: 12'7'

Rockville Center at Maryland Ave. & Courthouse Sq.
Fountain Park Area: Approx. 8,610 sq. ft.
Fountain Seating/Walkway Area: Approx. 1,282 sq. ft.
Fountain Area: Approx. 113 sq. ft.
Exterior Walkway: 10'0"

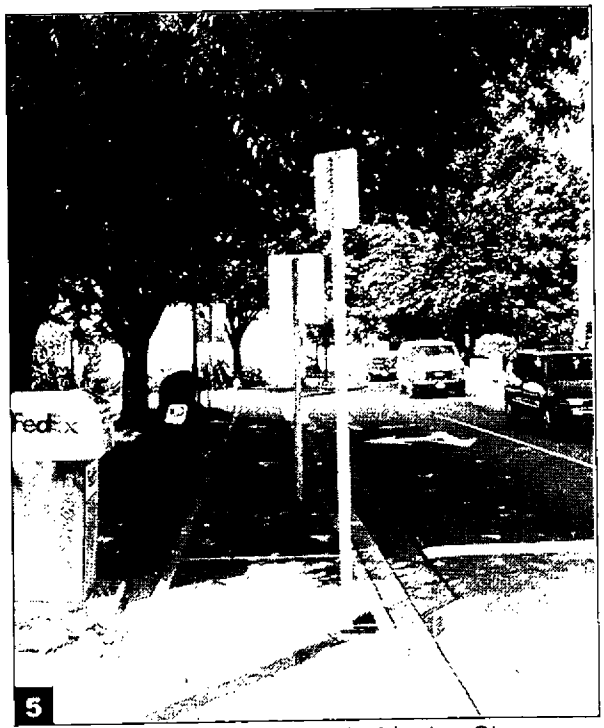
Continued...

Rockville Town Center, Rockville, Maryland

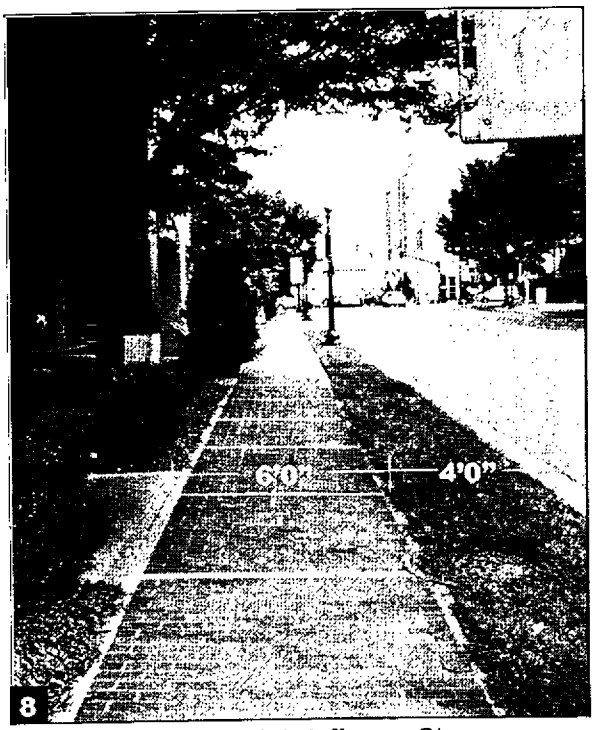


E. Middle Ln. & N. Washington St.
Street Edge Planting Area: 4'9"
Center Walkway: 4'3"
Building Edge Planting Area: 3'0"

Rockville Center at Maryland Ave. & Courthouse Sq.
Walkway: 5'0"



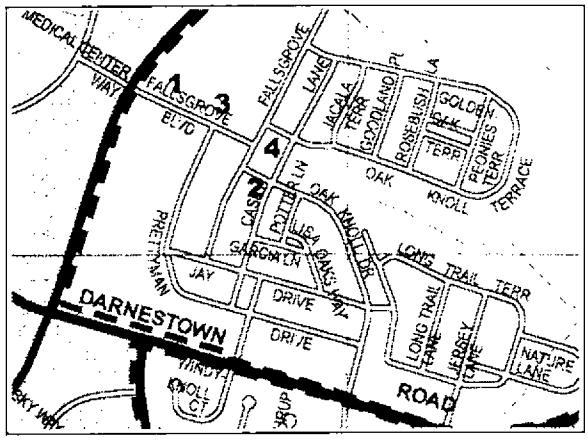
E. Montgomery Ave. & N. Washington St.
Walkway: 5'7"



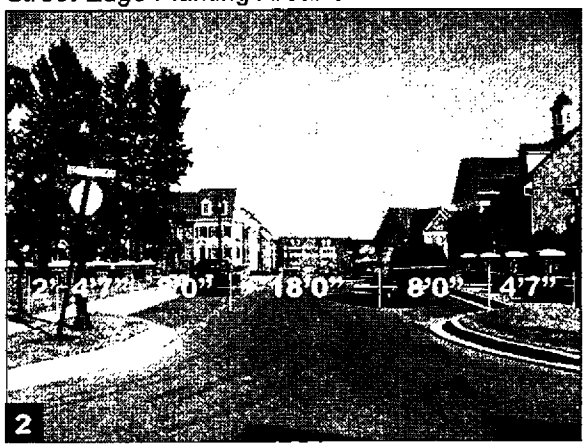
S. Washington St. & W. Jefferson St.
Walkway: 6'0"
Planting Area: 4'0"

Fallsgrove, Rockville, Maryland

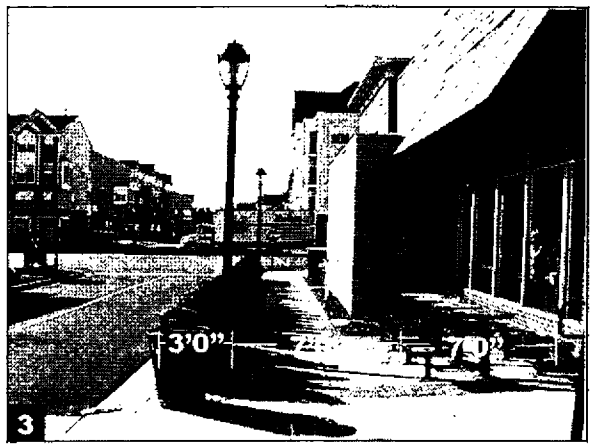
Streetscape Elements



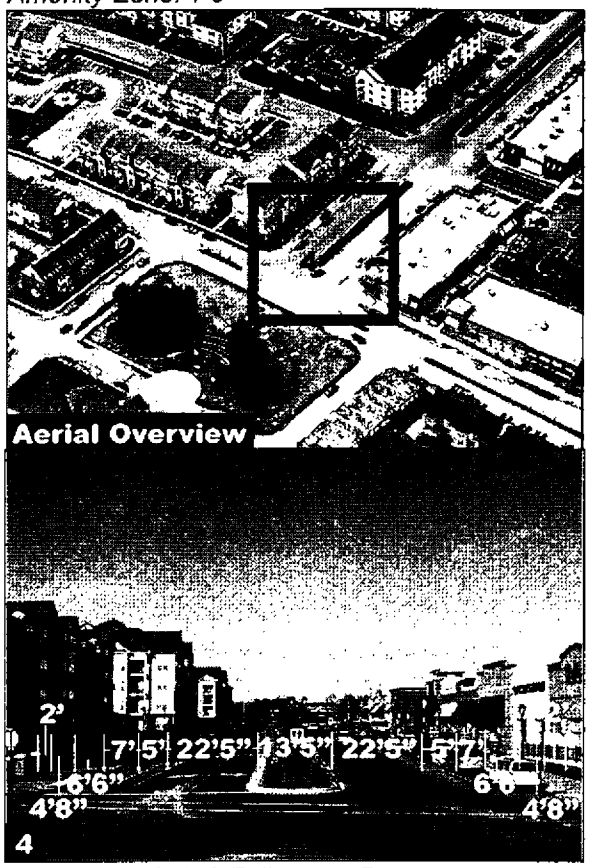
Fallsgrove Blvd. Between Shady Grove Rd. & Prettyman Dr.
Interior Walkway: 6'2"
Walkway Buffer: 1'5"
Planting Area: 3'5"
Exterior Walkway: 4'7"
Street Edge Planting Area: 6'6"



Oak Knoll Dr. & Casey Ln.
Planting Strip: 2'0"
Walkway: 4'7"
Parking Lane: 8'0"
Drive Lane: 17'5"



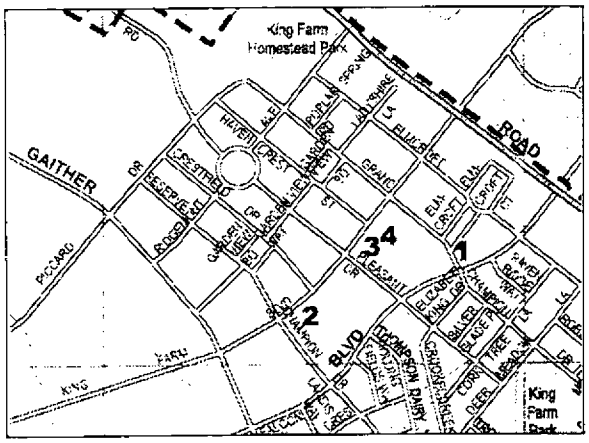
Fallsgrove Village Center at Prettyman Dr. & Fallsgrove Blvd.
Planting Area: 3'0"
Walkway: 7'0"
Amenity Zone: 7'0"



Fallsgrove Blvd. & Fallsgrove Dr.
Planting Strip: 2'0"
Walkway: 4'8"
Planting Area: 6'6"
Parking Lane: 7'0"
Bicycle Lane: 5'0"
Driving Lanes: 22'5"
Median: 13'5"

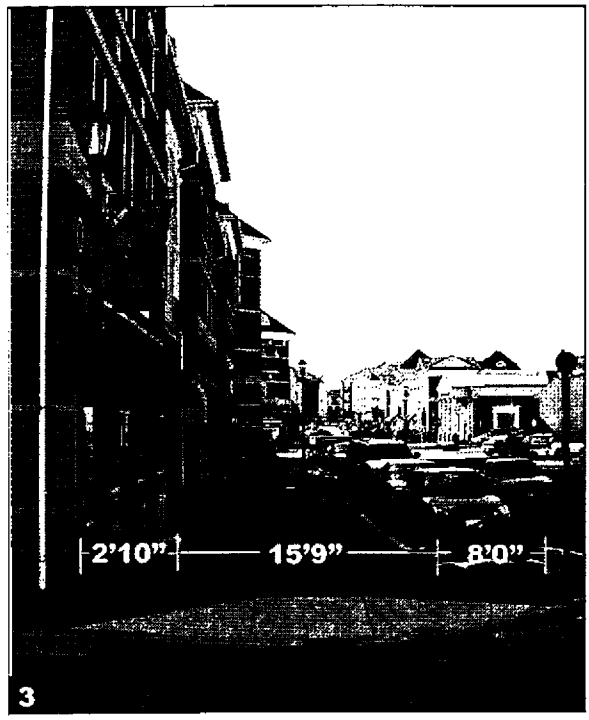
King Farm, Rockville, Maryland

Streetscape Elements

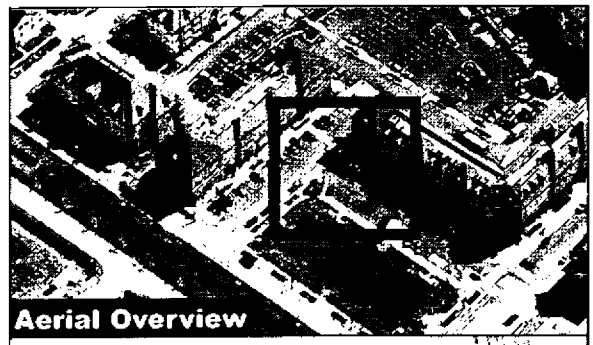


Redland Blvd. & Grand Champion Dr.
Building Edge Planting Area: 10'8"
Walkway: 4'0"
Street Edge Planting Area: 6'0"

King Farm Blvd. Between Reserve Champion Dr. & Crest Field Dr.
Street Buffer Zone: 1'7"
Planting Area: 6'7"
Walkway: 4'2"
Amenity Zone: 4'0"

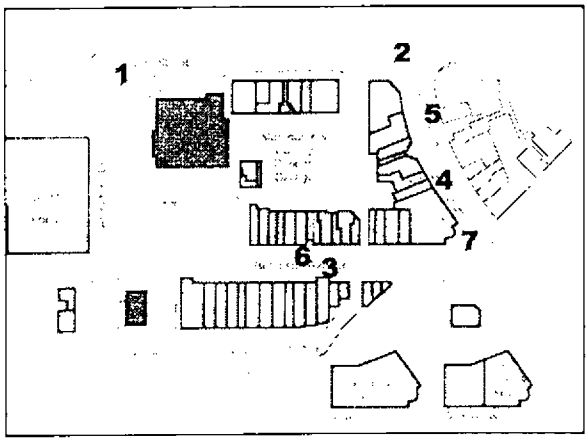


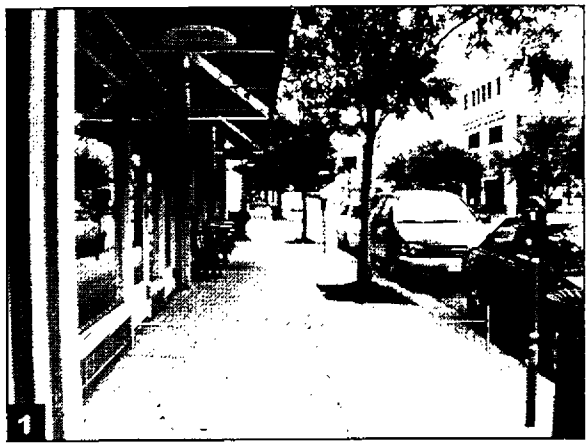
King Farm Village Center on King Farm Blvd.
Between Havencrest St. & Pleasant Dr.
Amenity Zone: 2'10"
Walkway: 15'9"
Parking Lane: 8'0"



King Farm Village Center on King Farm Blvd.
Between Havencrest St. & Pleasant Dr.
Walkway: 8'5"
Amenity Zone: 8'0"

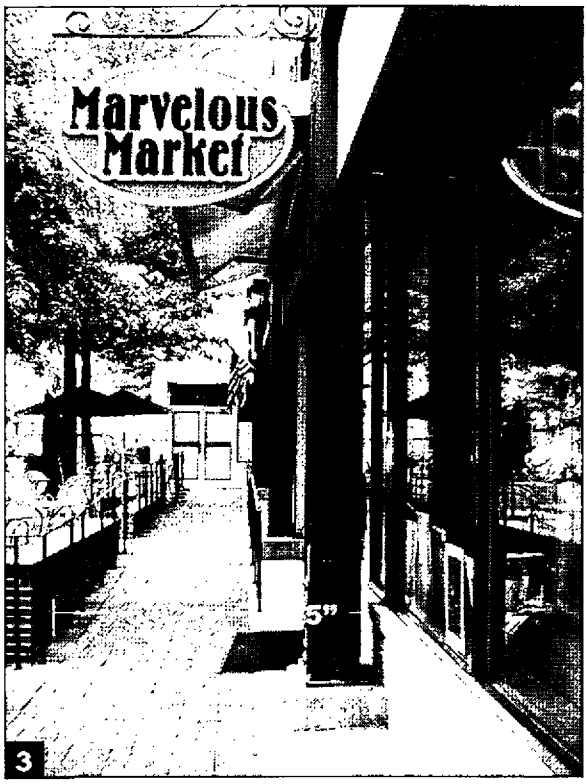
Bethesda Row, Bethesda, Maryland



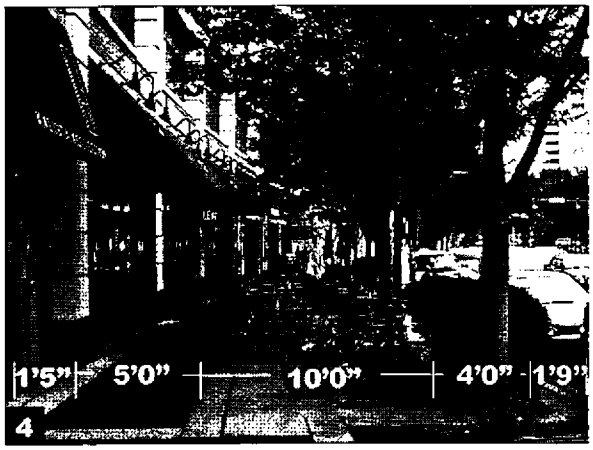


Elm St. & Arlington Rd.
Walkway and Planting Area: 11'2"

Elm St. & Woodmont Ave.
Walkway and Planting Area: 13'8"



Bethesda Ave. Between Woodmont Ave. & Arlington Rd.
Walkway: 5'0"
Storefront Expansion Zone: 1'5"

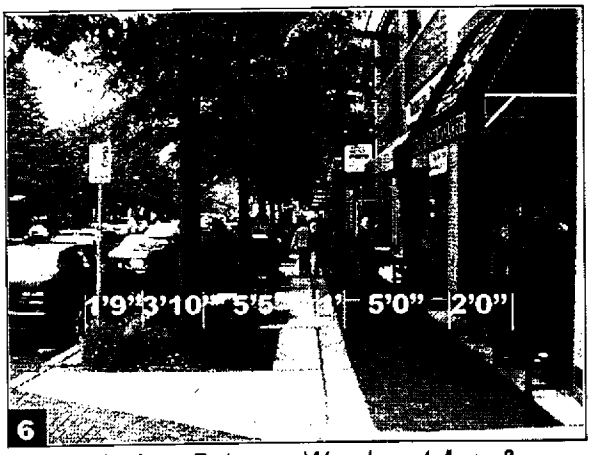


Woodmont Ave. Between Bethesda Ave. & Elm St.
Storefront Expansion Zone: 1'5"
Pedestrian Walkway: 5'0"
Amenity Zone: 10'0"
Planting Buffer Zone: 4'0"
Street Buffer Zone: 1'9"

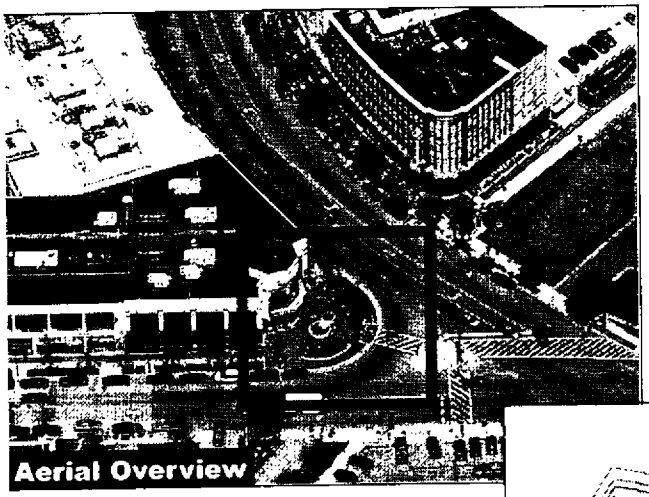
Continued...

Bethesda Row, Bethesda, Maryland

Woodmont Ave. Between Bethesda Ave. & Elm St.
Street Buffer Zone: 2'5"
Planting Area: 2'3"
Amenity Zone: 8'5"
Amenity Buffer: 1'2"
Walkway: 5'0"
Storefront Expansion Zone: 1'2"

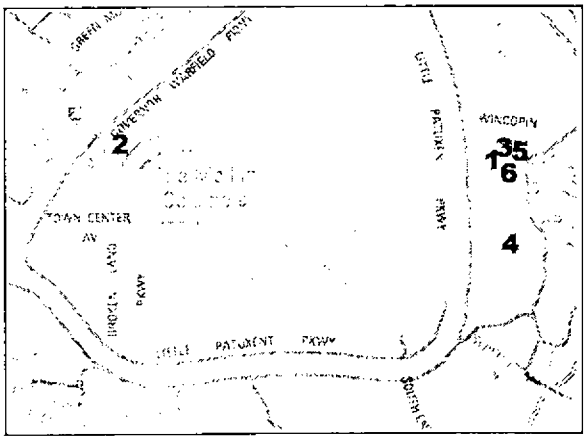


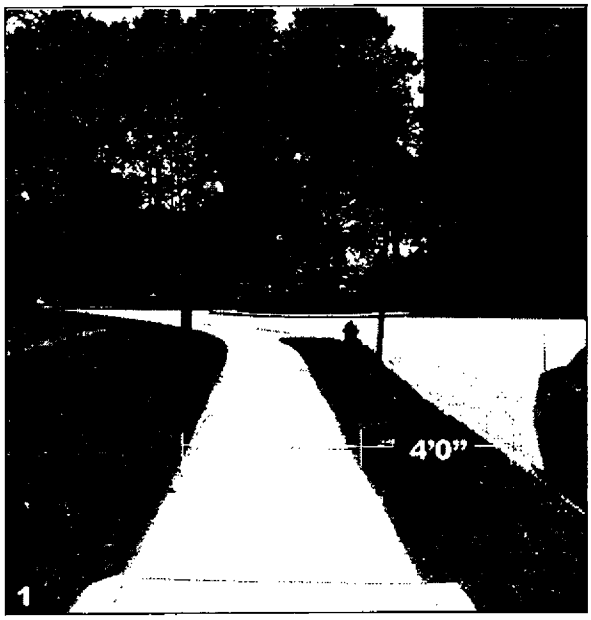
Bethesda Ave. Between Woodmont Ave. & Arlington Rd.
Street Buffer Zone: 1'9"
Planting Area: 3'10"
Amenity Zone: 5'5"
Amenity/Walkway Buffer: 1'0"
Walkway: 5'0"
Storefront Expansion/Amenity Zone: 2'0"



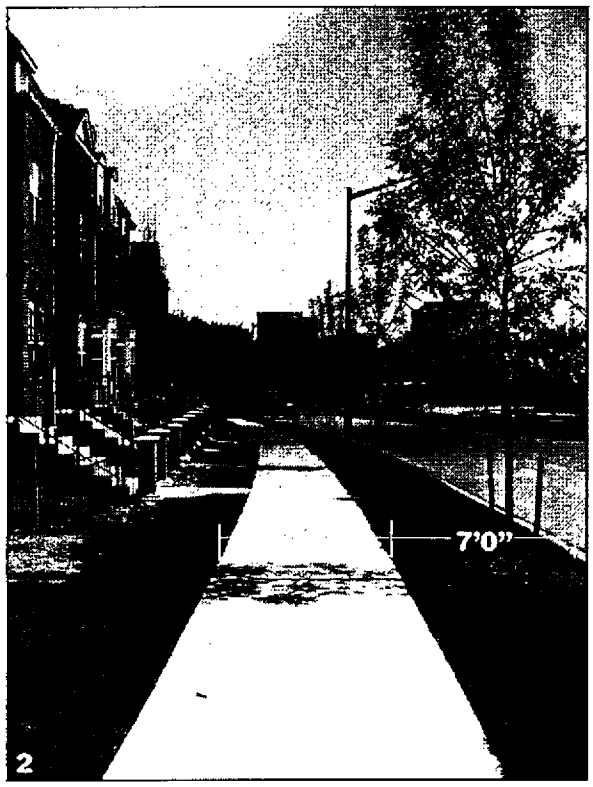
Woodmont Ave. & Bethesda Ave.
Exterior Walkway: 8'5"
Plaza Area: Approx. 2,808 sq. ft.
Fountain Area: Aprox. 135 sq. ft.

Columbia Town Center, Columbia, Maryland

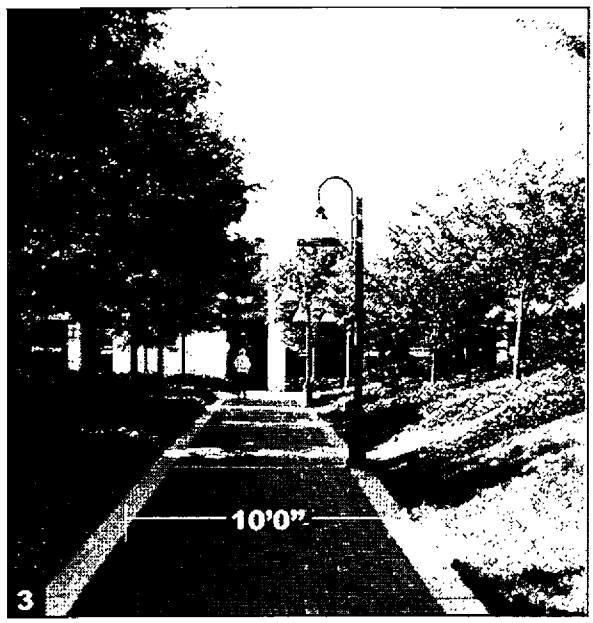




Wincopin Circle Between Sterrett Pl. & South Entrance Rd.
Walkway: 5'0"
Planting Area: 4'0"



Twin Rivers Rd. Between Broken Land Pkwy. & Little Patuxent Pkwy.
Walkway: 6'0"
Planting Area: 7'0"

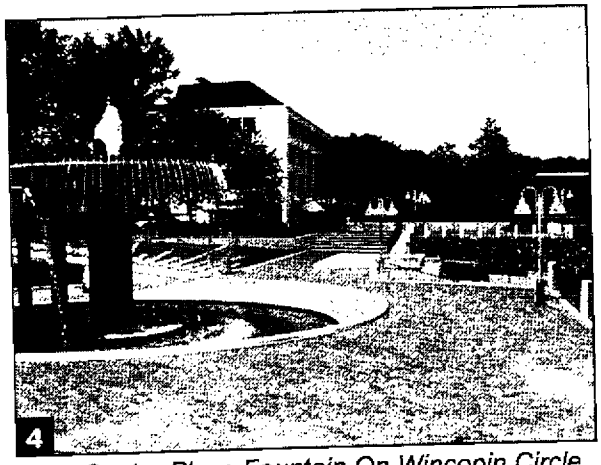


Town Center Plaza On Wincopin Circle Between Sterrett Pl. & South Entrance Rd.
Walkway: 10'0"
Utility Area: 1'0"

Continued...

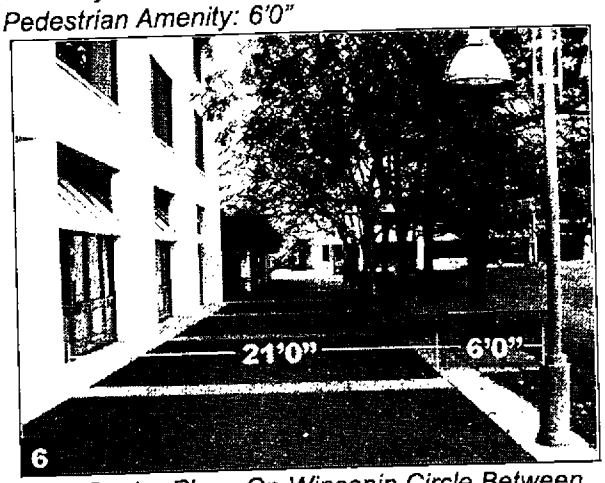
Columbia Town Center, Columbia, Maryland

Streetscape Elements

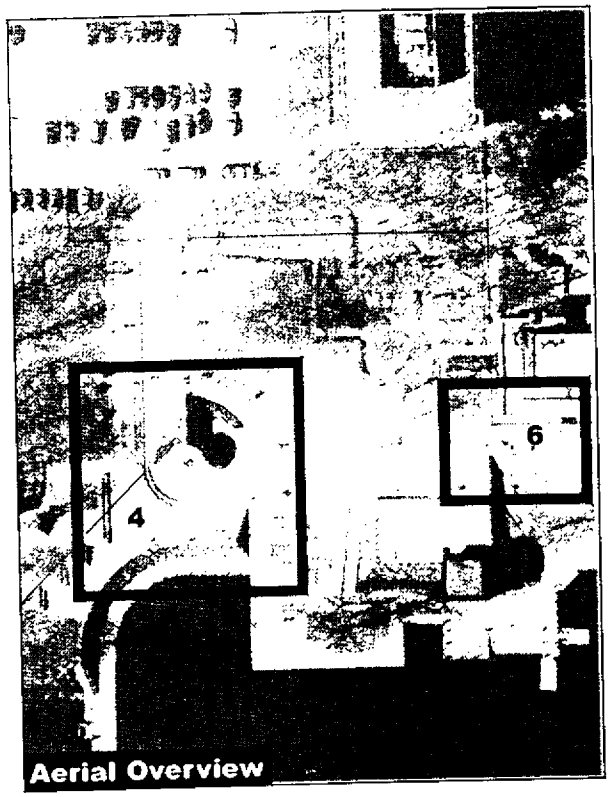


Town Center Plaza Fountain On Wincopin Circle Between Sterrett Pl. & South Entrance Rd.
Fountain Plaza Area: Approx. 8,500 sq. ft.
Fountain Area: Approx. 2,250 sq. ft.

Town Center Plaza On Wincopin Circle Between Sterrett Pl. & South Entrance Rd.
Walkway: 31'0"
Pedestrian Amenity: 6'0"

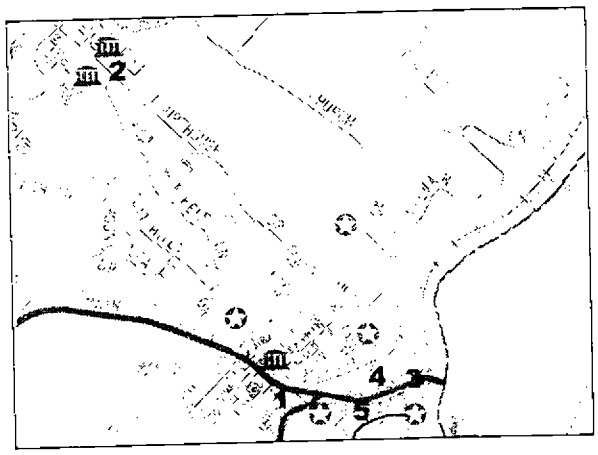


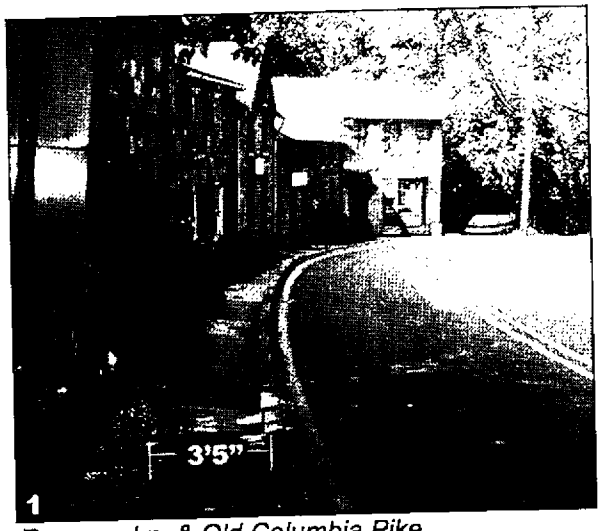
Town Center Plaza On Wincopin Circle Between Sterrett Pl. & South Entrance Rd.
Walkway: 21'0"
Pedestrian Amenity: 6'0"



Ellicott City, Maryland

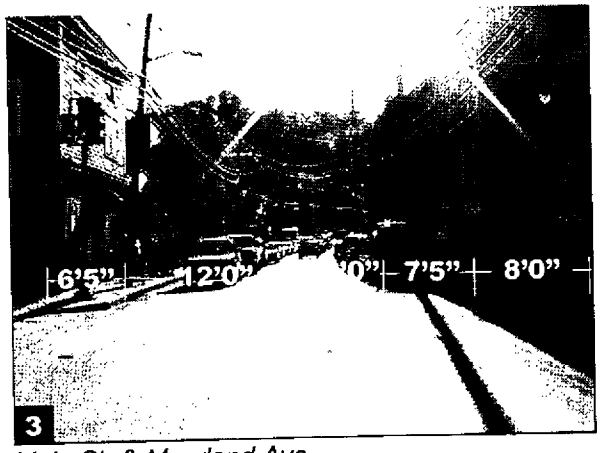
Streetscape Elements





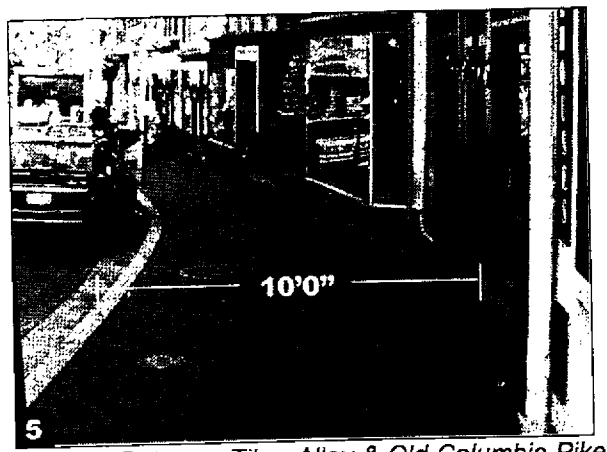
Roussey Ln. & Old Columbia Pike
Walkway: 3'5"

Court Place & Court Drive
Walkway: 4'0"
Bollard Zone: 2'7"



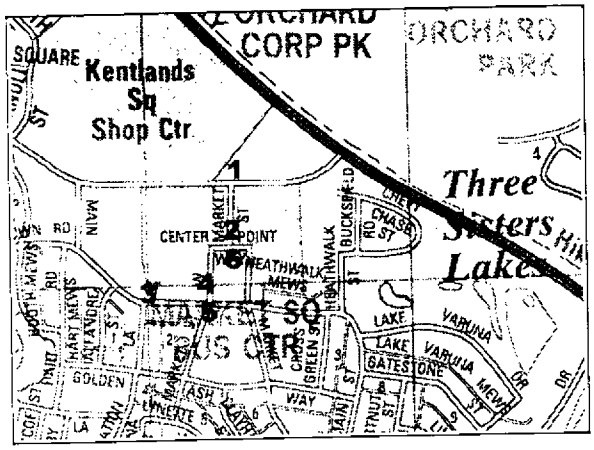
Main St. & Maryland Ave.
Left Walkway: 6'5"
Left Vehicular Zone: 12'0"
Right Driving Lane: 12'0"
Right Parking lane: 7'5"
Right Walkway: 8'0"

Main St. Between Tiber Alley & Maryland Ave.
Walkway: 7'0"

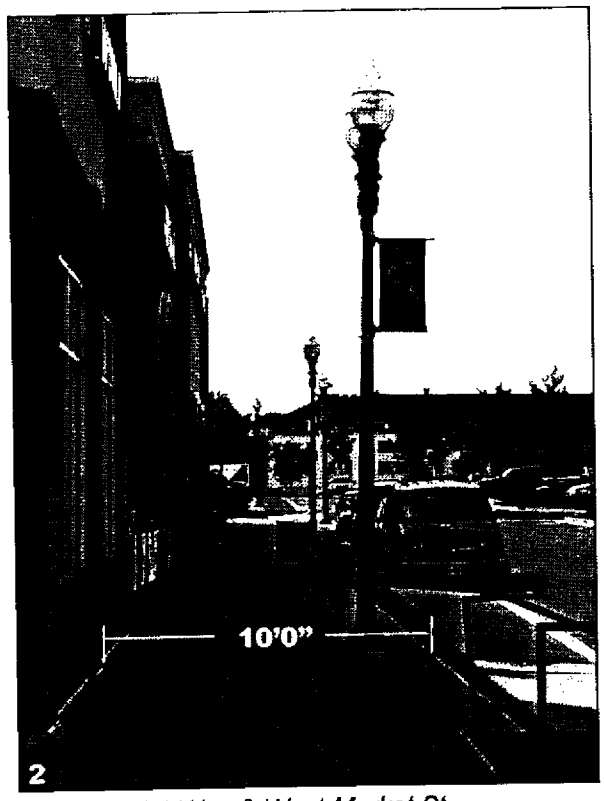


Main St. Between Tiber Alley & Old Columbia Pike
Walkway: 10'0"

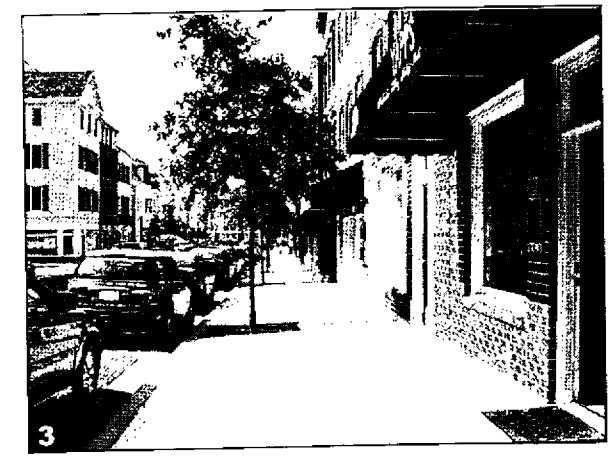
Kentlands, Gaithersburg, Maryland



Kentland Blvd. & Market St.
Walkway: 7'6"
Planting Area: 3'0" (Expands to 6'0")



Center Point Way & West Market St.
Walkway: 10'0"

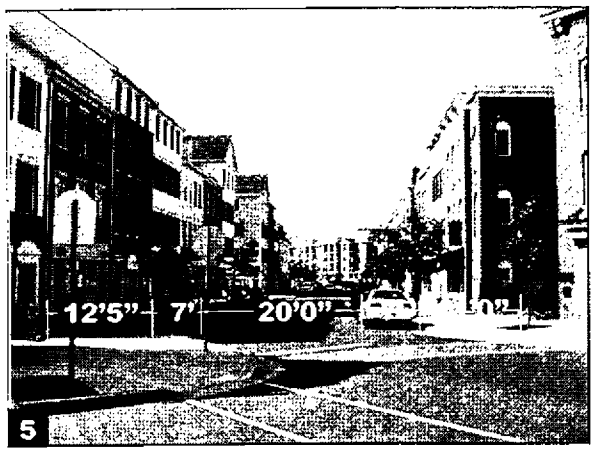


Main St. & Inspiration Ln.
Walkway and Planting Area: 11'0"

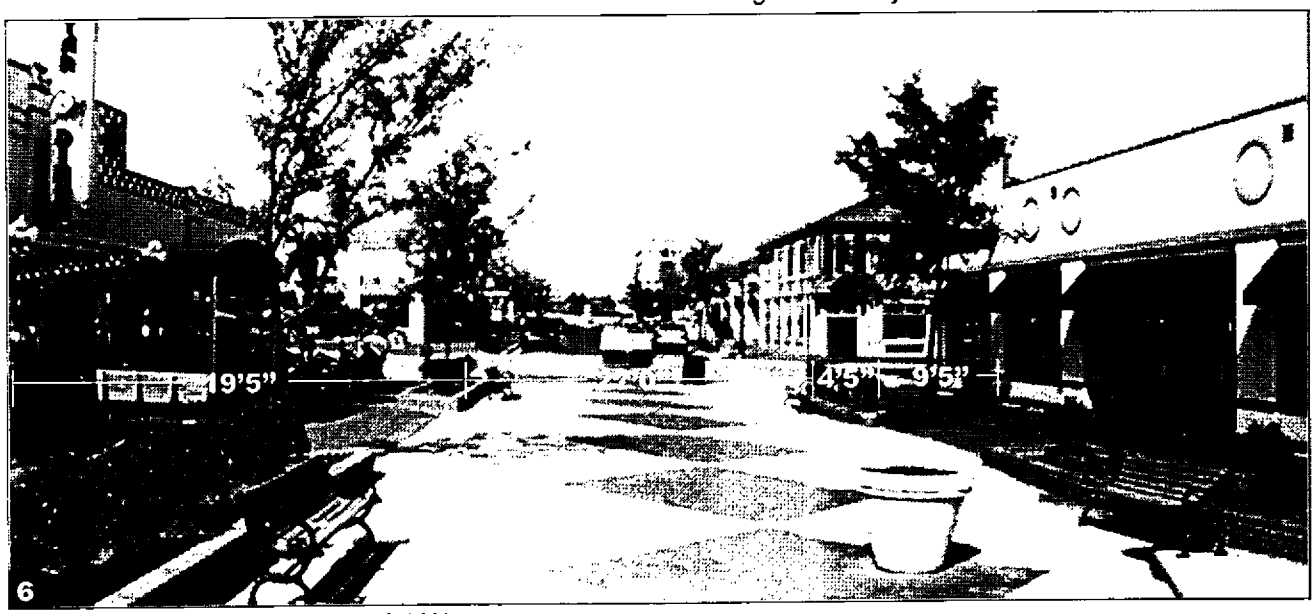
Continued...

Kentlands, Gaithersburg, Maryland

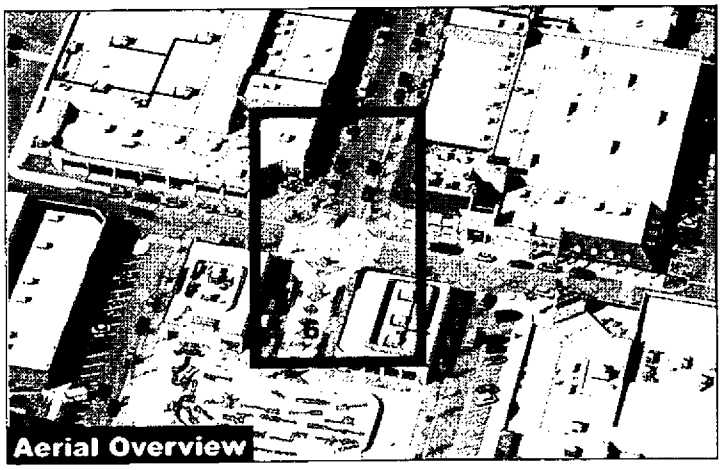
Main St. & Center Point Way
Walkway and Amenity Zone: 19'0"



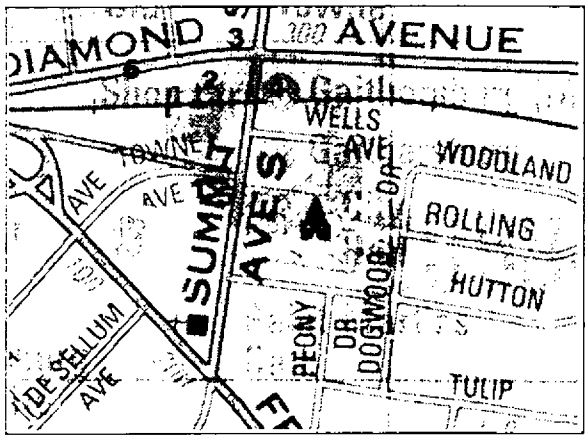
Inspiration Ln. & Main St.
Left Walkway: 12'5"
Parking Lane: 7'0"
Driving Lane: 20'0"
Right Walkway: 11'0"



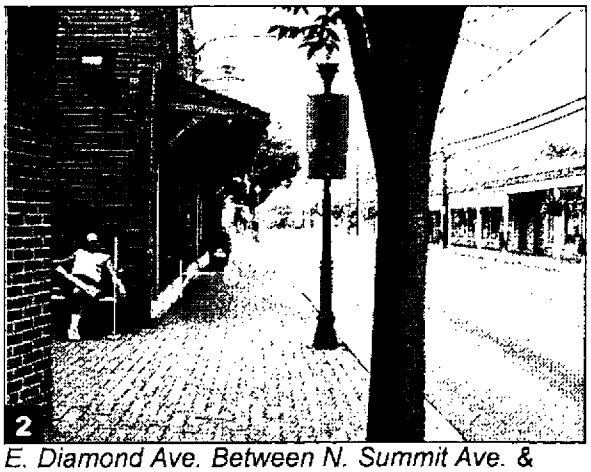
Market Street East & Center Point Way
Plaza Area: Approx. 2,530 sq.ft.
Left Amenity Zone: 19'5"
Center Walkway: 27'0"
Right Planting Area: 4'5"
Right Walkway: 9'5"



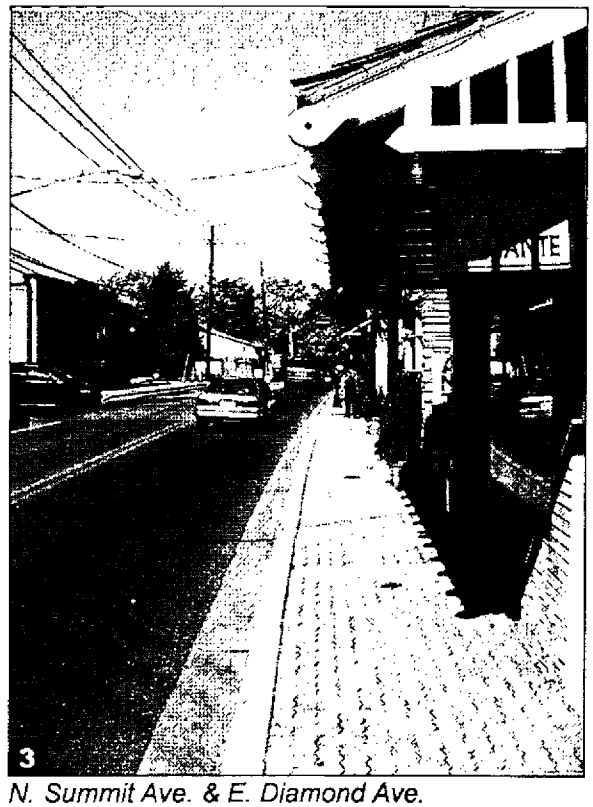
Olde Towne Gaithersburg, Maryland



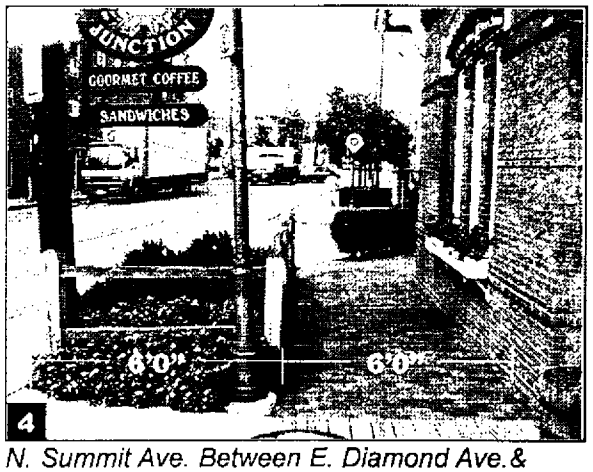
Old Towne Ave. Between S. Summit Ave. & Faulks Corner Ave.
Walkway and Planting Area: 21'6"



E. Diamond Ave. Between N. Summit Ave. & Park Ave.
Walkway: 8'3"



N. Summit Ave. & E. Diamond Ave.
Walkway: 5'8"



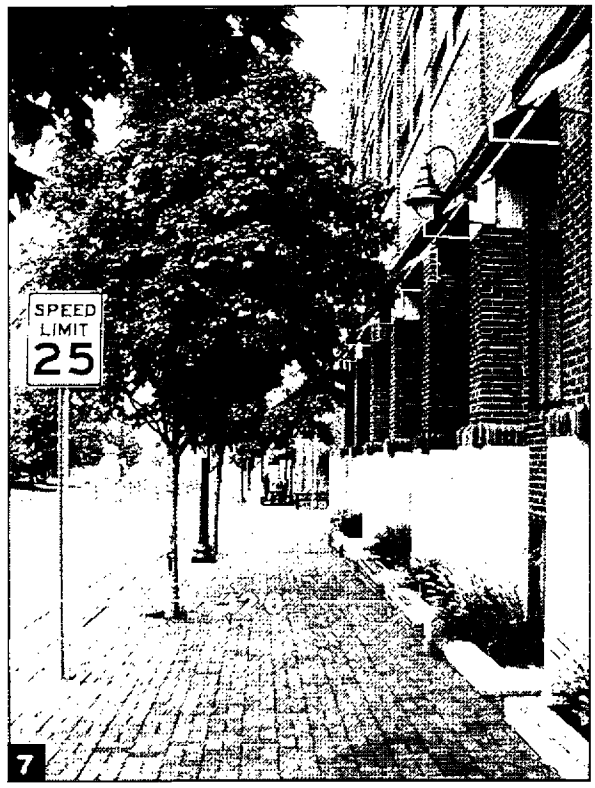
N. Summit Ave. Between E. Diamond Ave.& CSX/WMATA Rail Line
Walkway: 6'0"
Planting Area: 6'0" (Narrows to 2'0")

Continued...

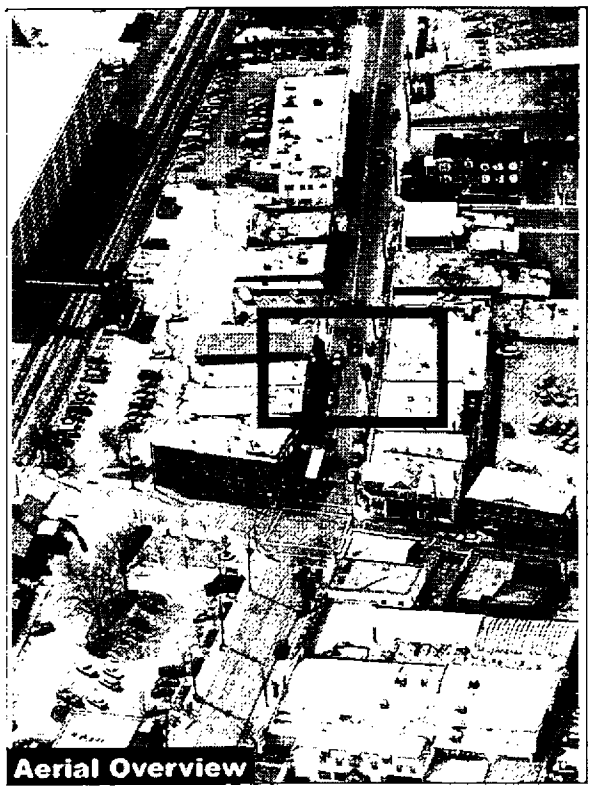
Olde Towne Gaithersburg, Maryland

S. Summit Ave. & Old Towne Ave.
Walkway and Planting Area: 27'0"

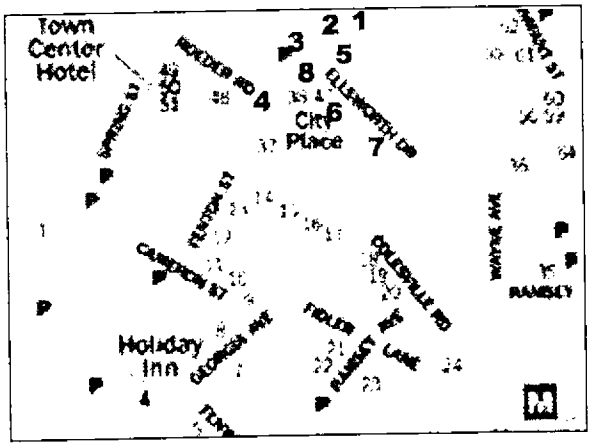
E. Diamond Ave. Between Park Ave. & N. Summit Ave.
Left Walkway: 9'0"
Left Vehicular Zone: 19'3"
Right Driving Lane: 12'8"
Right Walkway: 8'10"

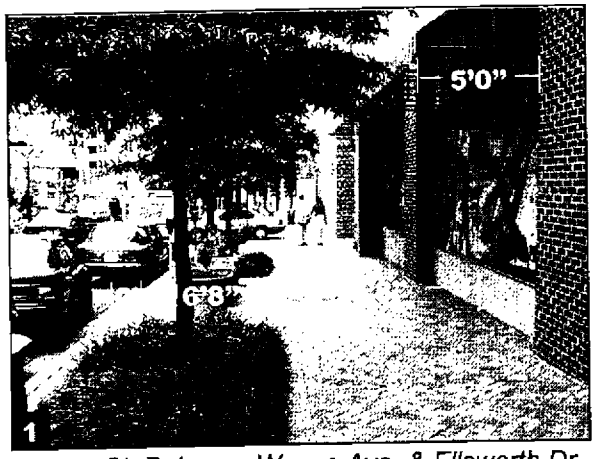


Olde Towne Ave. & S. Summit Ave.
Walkway and Planting Area: 12'0"

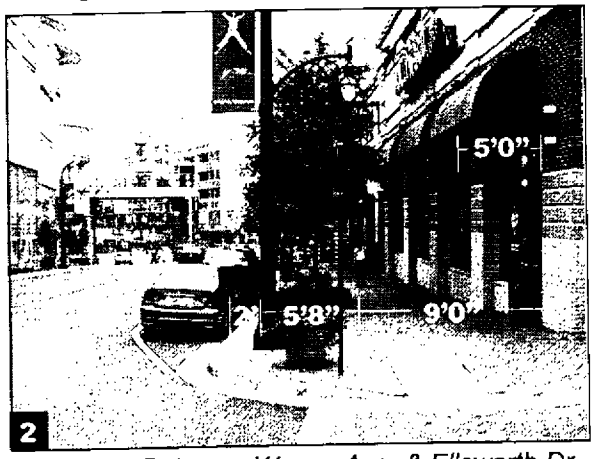


City Place, Downtown Silver Spring, Maryland

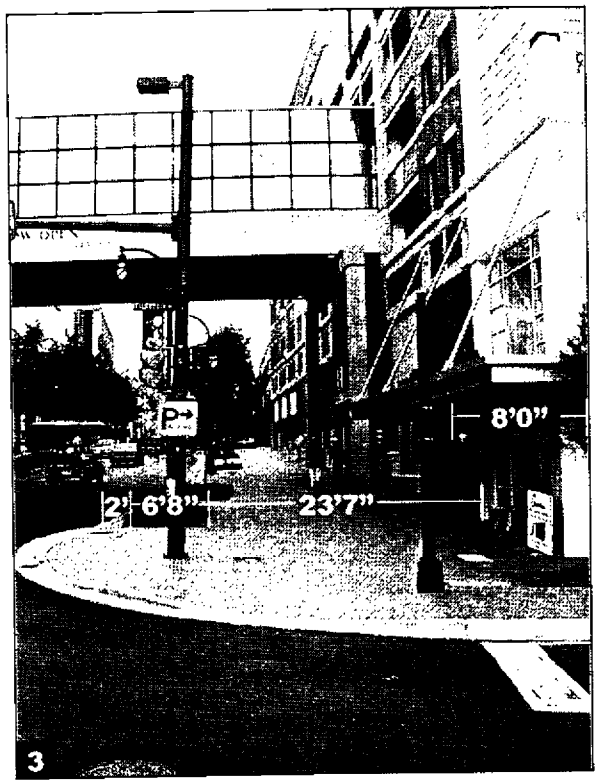




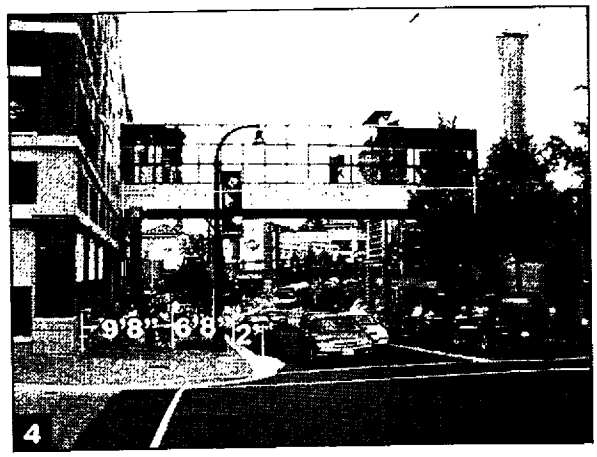
Fenton St. Between Wayne Ave. & Ellsworth Dr.
Street Buffer Zone: 2'0"
Planting/Amenity Area: 6'8"
Walkway: 8'8"
Building Face Awning: 5'0"



Fenton St. Between Wayne Ave. & Ellsworth Dr.
Street Buffer Zone: 2'0"
Planting/Amenity Area: 6'8"
Walkway: 9'0"
Pedestrian Awning: 5'0"



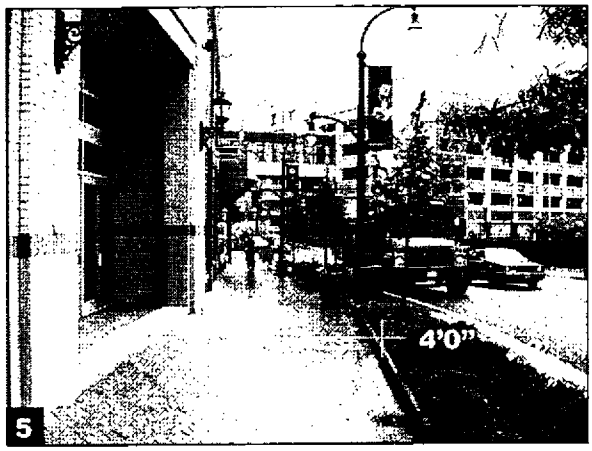
Fenton St. & Ellsworth Dr.
Street Buffer Zone: 2'0"
Planting Area: 6'8"
Walkway: 23'7"
Pedestrian Awning: 8'0"



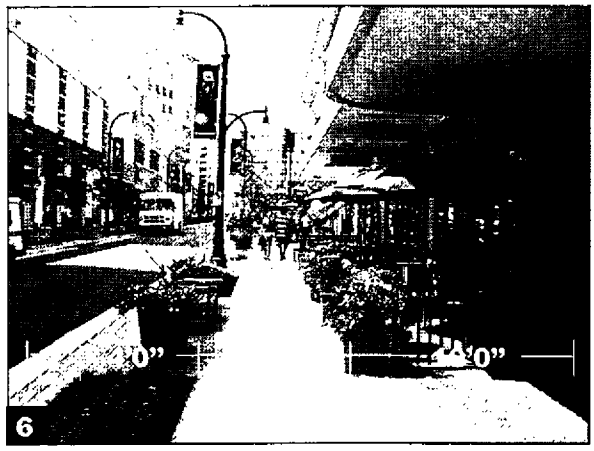
Roeder Rd. & Fenton St.
Street Buffer Zone: 2'0"
Planting Area: 9'8"
Pedestrian Overpass: 83'5"

City Place, Downtown Silver Spring, Maryland

Streetscape Elements



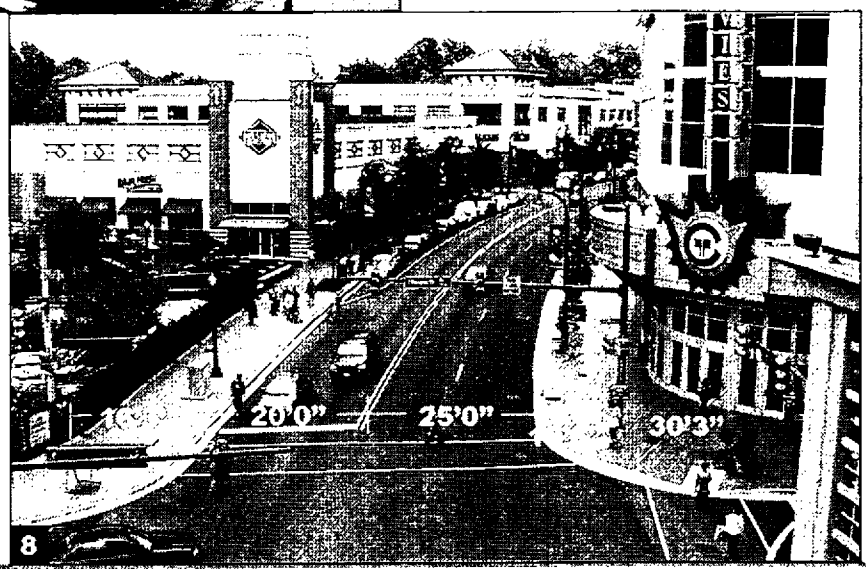
Fenton St. & Ellsworth Dr.
Walkway: 11'5"
Planting Area: 4'0"
Street Buffer Zone: 2'0"



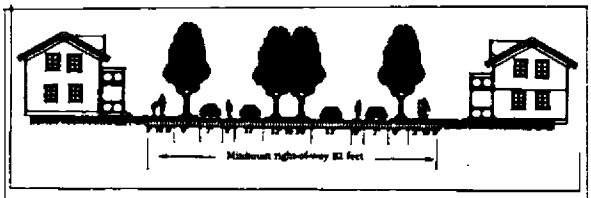
Ellsworth Dr. Between Fenton St. & Georgia Ave.
Street Buffer Zone: 2'0"
Planting Area: 4'0"
Walkway: 5'0"
Retail Expansion Zone: 10'0"

Ellsworth Dr. Between Fenton St. & Georgia Ave. "Downtown Silver Spring Fountain"
Plaza Area: Approx. 3,190 sq. ft.

Intersection of Fenton St. & Ellsworth Dr.
Left Walkway: 16'3"
Left Driving Lane: 20'0"
Right Driving Lane: 25'0"
Cross Walk: 10'5"
Right Corner Walkway: 30'3"



Comparative Analysis Figures & Illustrations



Avenue with Parking

Purpose: Connects town centers and neighborhoods. Avenues go from neighborhoods to town centers, and are not long (no more than one mile). Avenues may circulate around a square or neighborhood park.

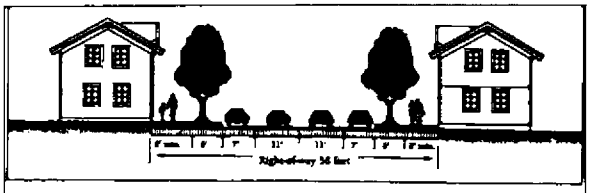
Street Features

- Street width 24 ft. on both sides of median with on-street parking (17 ft. if no parking), curb and gutter
- Median width 12-16 ft.
- Travel lanes 11 ft.
- Maximum two travel lanes
- Bike lanes and planting strips 6 ft.
- Sidewalks 5-8 ft. on each side
- Average speed 25-30 mph
- Utility location — underground
- Drainage — Curb and gutter, median can have swale for natural drainage and water retention

Buildings and Land Use

- Mixed residential and commercial use
- Buildings brought close to sidewalk
- Consistent building line recommended
- Place prominent public buildings and plazas at end of vista

Sidewalks in Business Districts and Downtowns
Healthy Neighborhood Street Design
Local Government Commission- California



Main Street without Median

Purpose: Provides access to, and a space for, neighborhood commercial and mixed-use buildings.

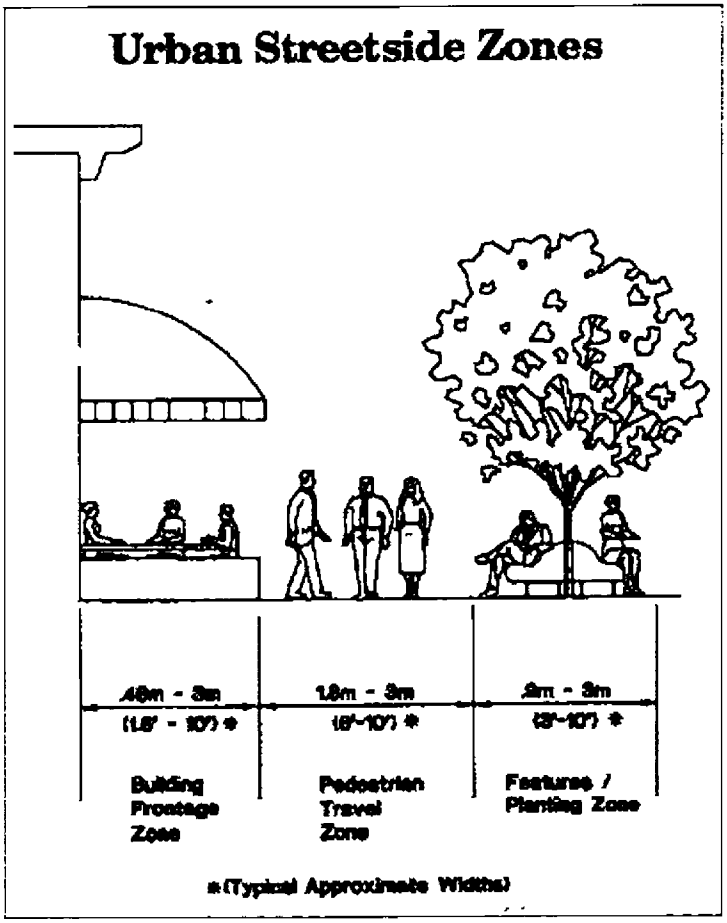
Street Features

- Travel lanes 11 ft. w/striped parking
- Maximum 6 travel lanes
- Planting wells 6 ft. / landscaped median optional
- Sidewalks minimum of 8 ft. each side
- Average speed 20-25 mph
- Utility location — underground
- Drainage — Curb and gutter
- Includes bulbouts at intersections and mid-block crossings
- Bike lanes optional but preferred

Buildings and Land Use

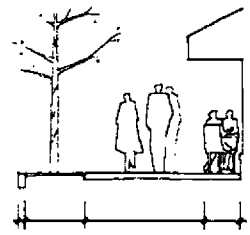
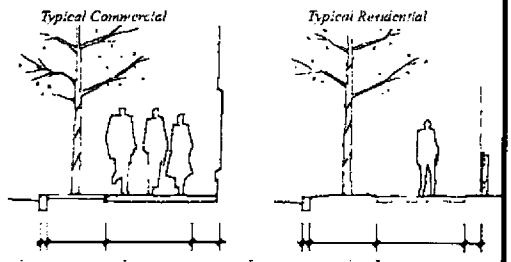
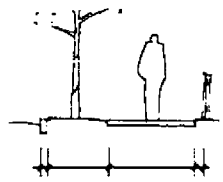
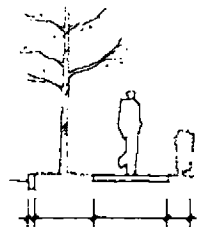
- Commercial and mixed use
- Buildings next to sidewalk
- Consistent building line recommended
- Pedestrian awnings, arcades, sidewalk dining and retail recommended

Sidewalks in Business Districts and Downtowns
Healthy Neighborhood Street Design
Local Government Commission- California



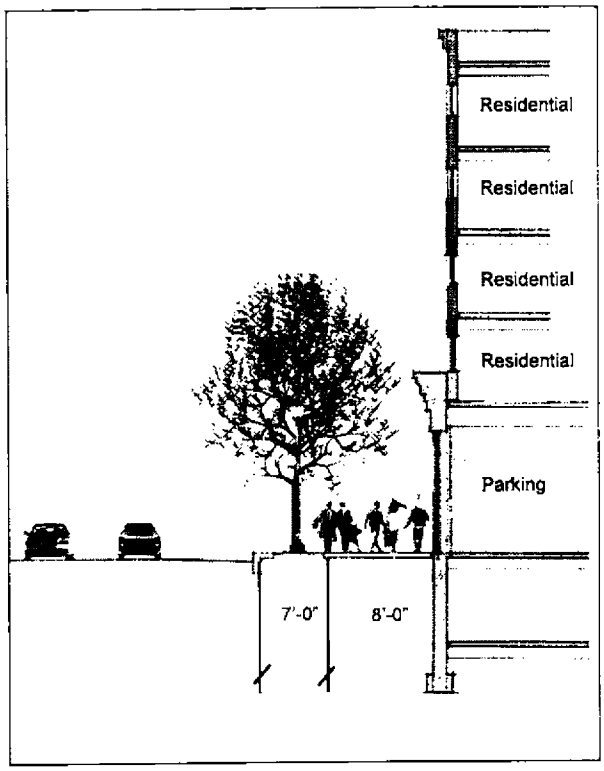
Sidewalks in Business Districts and Downtowns
Pedestrian Facilities Guidebook
Washington State

Comparative Analysis Figures & Illustrations

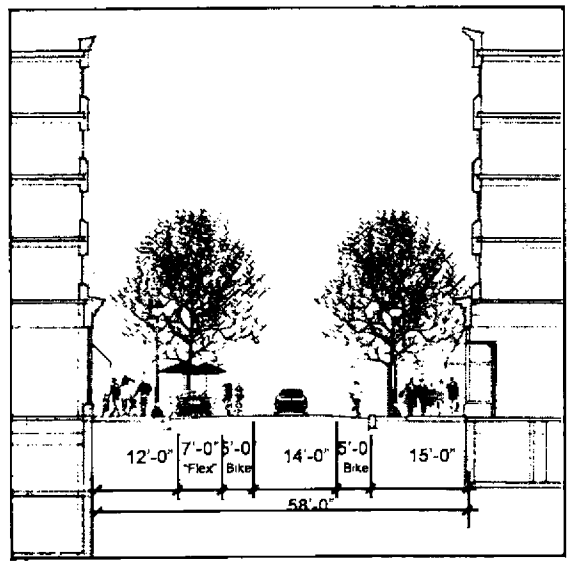
Sidewalk Corridor	Application	Recommended Configuration
4.6 m (15' - 0")	**Recommended** in Pedestrian Districts, especially for arterial streets or where ROW width is 24.5 m (80'-0").	 Curb Zone 150 mm (0' - 6") · Furnishings Zone 1.2 m (4' - 0") · Through Pedestrian Zone 2.5 m (8' - 0") · Frontage Zone 750 mm (2' - 6")
3.7 m 12' - 0"	**Recommended** for City Walkways, for local streets in Pedestrian Districts, and for streets where ROW width is 18.2 m (60'-0").	 Curb Zone 150 mm (0' - 6") · Furnishings Zone 1.2 m (4' - 0") · Through Pedestrian Zone 1.9 m (6' - 0") · Frontage Zone 450 mm (1' - 6")
3.4 m 11' - 0"	**Recommended** for Local Service Walkways where ROW width is 15.2 m (50'-0"). **Accepted** for City Walkways where ROW width is 15.2 m (50'-0") provided Through Pedestrian Zone is 1.9 m (6'-0").	 Curb Zone 150 mm (0' - 6") · Furnishings Zone 1.2 m (4' - 0") · Through Pedestrian Zone 1.9 m (6' - 0") · Frontage Zone 150 mm (0' - 6")
3.0 m (10' - 0")	**Recommended** for Local Service Walkways in residential zones of R-7 or less dense where ROW width is less than 15.25 m (50'-0").	 Curb Zone 150 mm (0' - 6") · Furnishings Zone 1.2 m (4' - 0") · Through Pedestrian Zone 1.5 m (5' - 0") · Frontage Zone 150 mm (0' - 6")

Guidelines for Sidewalk Corridors
Portland Pedestrian Design Guide
Portland, Oregon

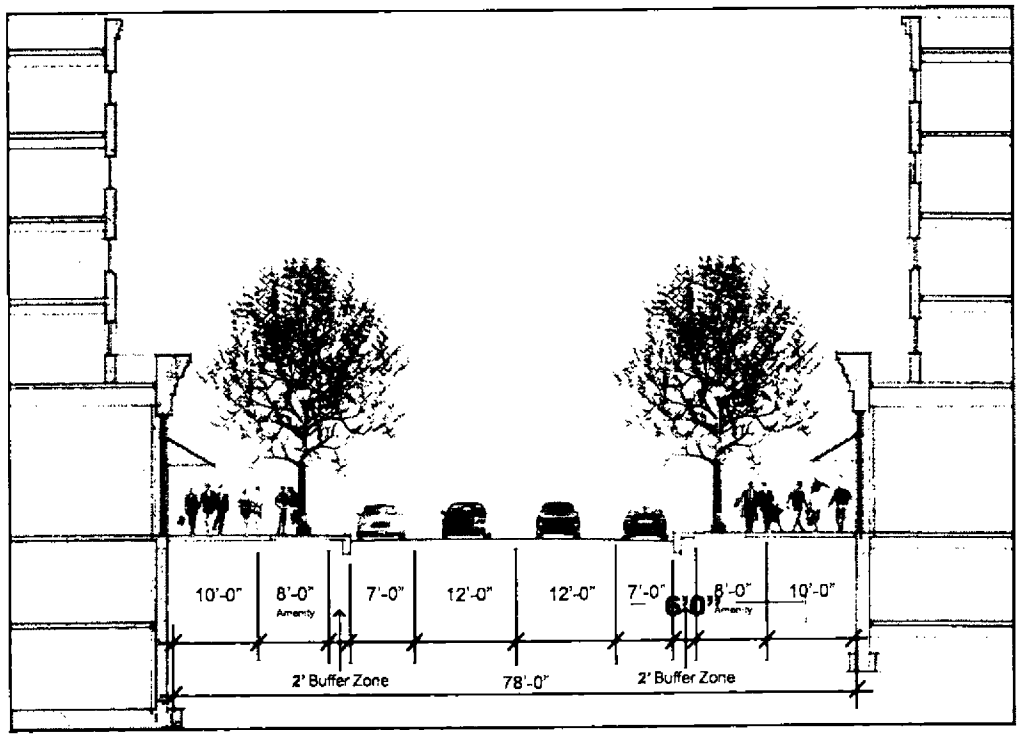
Comparative Analysis Figures & Illustrations



N. Washington Street Section
Rockville Town Center Design Guidelines
City of Rockville, Maryland



Newmarket Street Section
Rockville Town Center Design Guidelines
City of Rockville, Maryland



Maryland Avenue Section
Rockville Town Center Design Guidelines
City of Rockville, Maryland

ATTACHMENT 2

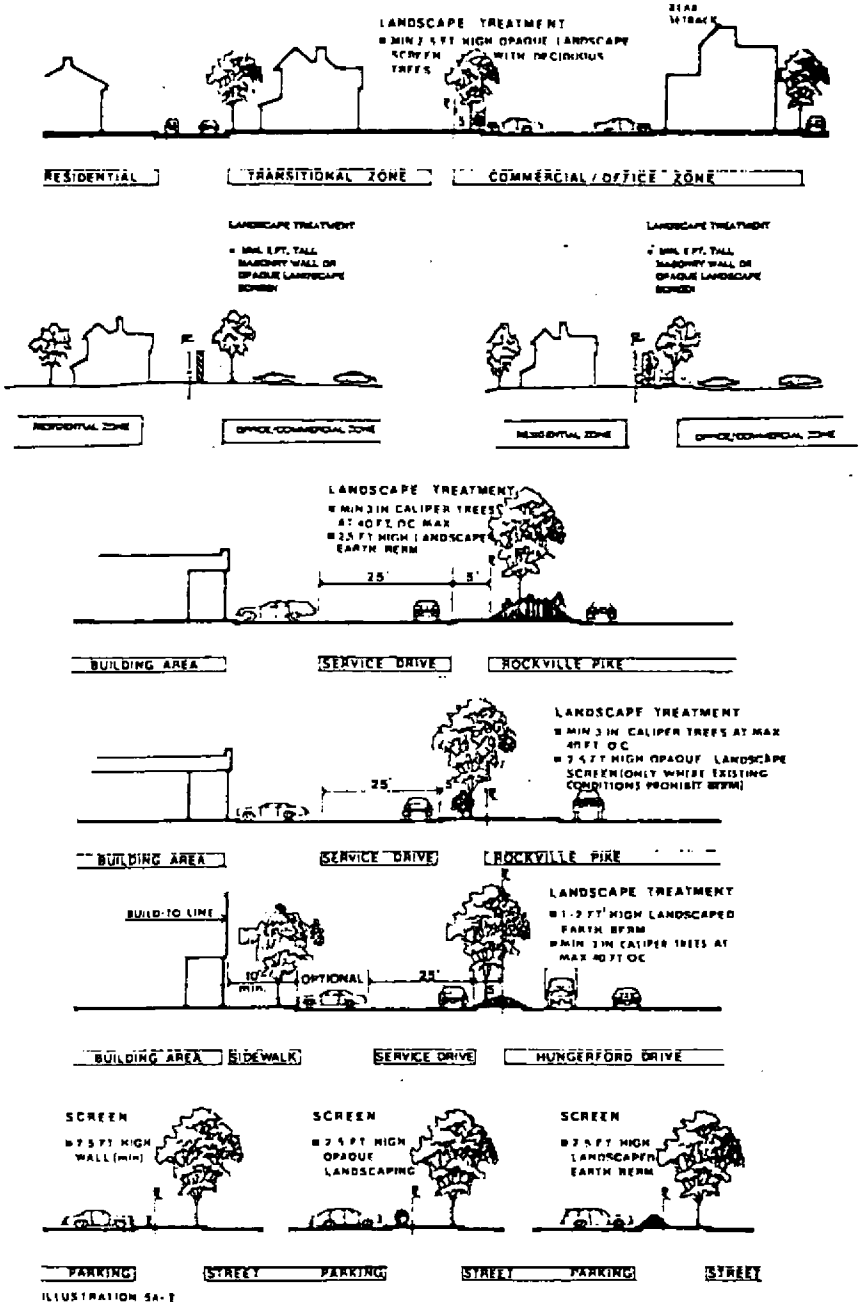


ILLUSTRATION 5A-1

(Laws of Rockville, Ch. 6, § 5A-205; Ord. No. 21-91, § 1(6), 8-5-91; Ord. No. 25-93, § 6, 12-13-93)

75

any expense incurred thereby. Any acceptance of the facilities by the City Manager shall be on behalf of the City by his written order, fully identifying the facilities.

(d) *Effect.* No bond or other security delivered under the provisions of this section shall be deemed to relieve the subdivider, his agents or servants from full compliance with all other applicable ordinances of the City, including the security requirements of chapter 21, article II. Delivery of security under the provisions of chapter 21, article II shall, however, to the extent of the facilities guaranteed thereby, entitle a subdivider to exemption from the requirements of this section.
(Laws of Rockville, Ch. 6, § 7-204)

Secs. 25-731—25-740. Reserved.

DIVISION 3. DESIGN STANDARDS

Sec. 25-741. Scope.

This division applies to subdivisions.

Sec. 25-742. Streets and highways.

(a) Streets shall conform to the transportation element of the Plan. Whenever a tract to be subdivided includes any part of a street, road or highway indicated on the Plan, such parts shall be suitably incorporated by the subdivider in his preliminary and final plans.

(b) All street and highway improvements shall be constructed in accordance with the specifications and requirements of chapter 21, article II. In addition, the subdivider shall comply with the following criteria for such improvements in connection with the subdivision:

(1) Streets shall reasonably conform to the natural contours of the land. However, in order to discourage through and high-speed traffic and to improve the stability of the subdivision by avoiding monotonous development in level or nearly level areas, straight portions of primary and secondary residential streets of

undue length shall be avoided whenever possible by the use of slight amounts of curvature;

(2) Where the subdivision abuts or contains an existing or proposed arterial street or major highway, the Planning Commission shall require either a service drive or lots with reverse frontage containing screen planting in a nonaccess reservation or easement along a property line or such other treatment as may be necessary for the adequate protection of such properties and to afford the separation of through and local traffic;

(3) Where a railroad right-of-way or limited access highway right-of-way abuts a subdivision, the preliminary and final plans shall provide full use of the intervening land. Provisions shall be made for future grade separations whenever the Commission shall find that the same are, or will be, necessary;

(4) Streets shall be continuous and in alignment with existing roads as far as practicable, and shall compose a convenient system to ensure free circulation of vehicular and pedestrian traffic;

(5) If adjoining property is not subdivided, provision shall be made for the projection of proposed roads by continuing the full widths of rights-of-way laid out for the roads to the boundaries of the subdivision. This provision shall not prevent the establishment of cul-de-sacs within the subdivision;

(6) Where the preliminary and final plans submitted include only part of the tract owned by the subdivider, the Commission may require a sketch of the tentative road system for all or any part of the unsubdivided contiguous land, supported by such other data as the Commission may reasonably determine to be necessary;

(7) No street names shall be used which will duplicate or be confused with the names of existing streets. Street names shall be established by the Commission;

(8) Permanent cul-de-sac streets shall not be longer than fifteen hundred (1500) feet in length and shall be provided at the closed end with a circular turnaround area having a one hundred ten (110) foot diameter right-of-way;

77

(9) Property lines at street intersections shall be rounded with a radius of twenty-five (25) feet or of a greater radius where the Commission may reasonably deem it necessary. The Commission may permit comparable cutoffs or chords in place of rounded corners;

(10) Street jogs with centerline offsets of less than one hundred twenty-five (125) feet are prohibited;

(11) Reservation strips controlling access to streets shall be prohibited if they conflict with a needed pedestrian or vehicular thoroughfare;

(12) A tangent at least one hundred (100) feet long shall be introduced between reverse curves on business, arterial and primary residential streets;

(13) Streets shall be laid out so as to intersect as nearly as possible at right angles and no street shall intersect any other street at less than sixty (60) degrees;

(14) Street right-of-way widths shall be as shown in the Transportation Element of the Plan and chapter 21, article II. Where not shown therein, the right-of-way for secondary residential streets shall be at least sixty (60) feet in width, except that on permanent cul-de-sac streets a right-of-way of fifty (50) feet may be permitted.
(Laws of Rockville, Ch. 6, § 7-301)

Sec. 25-743. Alleys.

All alley improvements shall be constructed in accordance with the specifications and requirements of chapter 21, article II. In addition, the developer shall comply with the following criteria for such improvements in connection with a subdivision:

(1) Intersections and sharp changes in the alignment of alleys are prohibited. In the event that a variance from this requirement is granted, corners shall be cut off sufficiently to permit safe vehicular movement;

(2) Dead-end alleys are prohibited.
(Laws of Rockville, Ch. 6, § 7-302)

dures as set forth in the definition of erosion area in section 25-1. The procedures shall be conducted by or at the expense of the subdivider.

(b) The Commission may waive this requirement where land bordering on a stream is used in conjunction with private recreation or conservation uses.

(c) The erosion area limits may be reduced if evidence can be provided to show that the soil types within the erosion limit area can adequately resist the erosive affects of the one hundred (100) year storm (based on the soil classification contained in the Montgomery County Maryland Soil Survey, Series 1958, No. 7, printed by the United States Department of Agriculture.).
(Laws of Rockville, Ch. 6, § 7-310)

Secs. 25-752—25-765. Reserved.

DIVISION 4. REQUIRED IMPROVEMENTS

Sec. 25-766. Monuments.

(a) Two (2) stone or concrete reference monuments of a size and type approved by the City Manager shall be set within each block or portion thereof and the location of each shall be established on the final plat.

(b) Metal monuments of a size and type approved by the City Manager shall be located in the ground at all intersections of streets and alleys with plat boundary lines where there is a change in direction or curvature.

(c) All monuments shall be clearly visible upon the completion of all improvements and shall be flush with the ground.
(Laws of Rockville, Ch. 6, § 7-401)

Sec. 25-767. Utility and street improvements.

The subdivider shall provide the following public utility and street improvements in connection with his subdivision, except those improvements provided by the City and paid for on an assessment basis. All such improvements shall be constructed in

accordance with the specifications and requirements of the applicable codes, ordinances or regulations of the City.

(1) Roads, including such related improvements as are required by chapter 21, article II;

(2) Stormwater drainage as required by chapter 21, article II;

(3) Every portion of a subdivision shall be supplied with public water and sanitary sewerage facilities. Where the location of a lot would not warrant the extension of these public facilities, the Council may waive this requirement. Such a waiver shall be contingent upon the approval of the County Health Officer as to the size, shape, frontage, and setbacks of the lot, parcel or tract. The Commission shall also forward a recommendation to the Council with regard to the waiver requested;

(4) Crosswalks, when required by the Commission as provided in division 3 of this article;

(5) Streetlights, in accordance with plans and specifications approved by the appropriate public utility and the City Engineer.

(Laws of Rockville, Ch. 6, § 7-402)

Secs. 25-768—25-780. Reserved.

DIVISION 5. PLAT AND DATA REQUIREMENTS

Sec. 25-781. Approval of preliminary plans.

The preliminary plan shall be clearly and legibly drawn or reproduced at a scale of not less than one (1) inch equals one hundred (100) feet, and on one (1) sheet wherever possible. The plan shall be designed in compliance with the provisions of this article, and shall give or show the following information and such other information as the Planning Commission reasonably deems necessary:

(1) A key map showing the entire subdivision and its relationship to surrounding areas;

ATTACHMENT 3

(c) Wherever alternative standards and specifications are provided any one (1) alternative may be chosen at the option of the person applying for a permit.
(Laws of Rockville, Ch. 7, §§ 7-1.04, 7-1.06(a))

Sec. 21-20. Waivers.

(a) Upon the recommendation of the City Manager, or upon petition of any abutting property owner liable for assessment in the construction of any front foot benefit project, the Council may include in the notice of hearing required by the Charter, a notice that the City Manager or abutting owner, as the case may be, has recommended or requested a waiver of any requirements of this article for sidewalks, rights-of-way and paving widths and grade percentages, drainage structures, and curbs and gutters. Any interested person shall be entitled to appear and be heard at the public hearing, and following such hearing the Council may authorize and approve any recommended or requested waiver as to any one (1) or a combination of the above items upon a majority vote of all of the Council members in open session.

(b) Where construction of a project is proposed by the City pursuant to section 21-22, the City Manager may recommend that any requirements of this article be waived as to sidewalks, rights-of-way and paving widths, grade percentages, drainage structures, and curbs and gutters. The Council shall then give public notice in the same manner as provided by the Charter for special assessments to the effect that the City proposes to construct such project and waive any one (1) or a combination of such items, and set a time and place for a public hearing. Any interested person shall be entitled to appear and be heard at the public hearing, and following the hearing the Council may authorize and approve any recommended waiver as to any one (1) or a combination of the above items by a majority vote of all of the Council members in open session.

(c) Upon applying for a permit under this article any person may file a written request for a waiver of any requirement of this article for sidewalks, rights-of-way and paving widths, grade percentages, drainage structures and curbs and gutters. The City Manager may expressly approve any requested waiver as to any

81

Sec. 21-24. Erection of street name signs.

The Engineer shall erect name signs at all road intersections.
Laws of Rockville, Ch. 7, § 7-1.06(b))

Sec. 21-25. Temporary turnarounds.

Temporary turnarounds shall be required wherever the paving for the road ends otherwise than at a paved road intersection. Such turnaround shall be graded, paved and appropriate drainage structures including temporary curbs and gutters installed as the Engineer finds necessary.
Laws of Rockville, Ch. 7, § 7-1.06(c))

Sec. 21-26. Minimum right-of-way width.

(a) Where a preliminary drainage study indicates that a minimum right-of-way width as herein established is inadequate for proper drainage of a particular road, the Engineer may require such additional right-of-way as is found necessary for such drainage purposes, provided that such requirement is made prior to the final approval and recording of a dedication plat among the land records of the County.

(b) In the event a minimum right-of-way as prescribed in Division 3 of this article is less than that established for a given road on a plat duly recorded among the land records of the County prior to May 25, 1955, then the width as established by such plat shall prevail and the minimum construction requirements for that road shall meet such standards and specifications as are found necessary and appropriate for such width by the Engineer.

(c) The construction of half roads or any road of less than the minimum width required by this article is prohibited; provided that construction of such portions of roads shall be permitted where the dedicated portion of the road established by a dedication plat and recorded among the land records of the County prior to May 25, 1955, is of sufficient width to permit the grading and construction of paving eighteen (18) feet in width with curbs and

82

c. Paving. Paving shall be in accordance with City standards and specifications;

d. Curbs and Gutters. Curbs and gutters shall be built in accordance with City standards and specifications;

e. Sidewalks. Sidewalks shall be built in accordance with City standards and specifications;

f. Pedestrian Ways. All pedestrian ways shall be built in accordance with plans and specifications approved by the Engineer of the City.
(Laws of Rockville, Ch. 7, § 7-1.05(c))

Sec. 21-60. Business district roads.

Business district roads shall be constructed in conformity with the following minimum requirements:

(1) *Width.* The right-of-way shall be at least seventy (70) feet wide unless prior to May 25, 1955, a dedication plat has been duly recorded among the land records of the County which established a right-of-way less than seventy (70) feet for a particular road, in which case the width of the right-of-way on such plat shall control. Paving shall be at least forty-eight (48) feet wide;

(2) *Construction.* The entire right-of-way shall be graded and there shall be installed paving, drainage structures, curbs and gutters and sidewalks;

(3) *Standards and specifications.*

a. Grading. All grading shall be done in accordance with plans and profiles approved by the Engineer and shall comply with City standards and specifications;

b. Drainage Structures. See section 21-28;

c. Paving. Paving shall be of the required width and in accordance with City standards and specifications;

d. Curbs and Gutters. Curbs and gutters shall be built in accordance with City standards and specifications;

e. Sidewalks. Sidewalks shall be built from the property line to the back line of the curb and in accordance with City standards and specifications.
(Laws of Rockville, Ch. 7, § 7-1.05(a))

Sec. 21-61. Dual lane roads.

Dual lane roads shall be constructed in accordance with the following minimum requirements:

(1) *Width.* The right-of-way shall be at least one hundred (100) feet. The width of pavement of each roadway where the dual lane is so classified shall be as follows:

a. Business road, thirty-two (32) feet;

b. Primary residential road or secondary residential road, twenty (20) feet;

(2) *Construction.* The entire right-of-way shall be graded and drainage structures and paving shall be installed. Wherever required by this article for the particular class in which a dual lane road is placed, curbs and gutters and sidewalks shall be installed;

(3) *Standards and specifications.*

a. Grading. All grading shall be done in accordance with plans and profiles approved by the Engineer and shall comply with City standards and specifications;

b. Drainage Structures. See section 21-28;

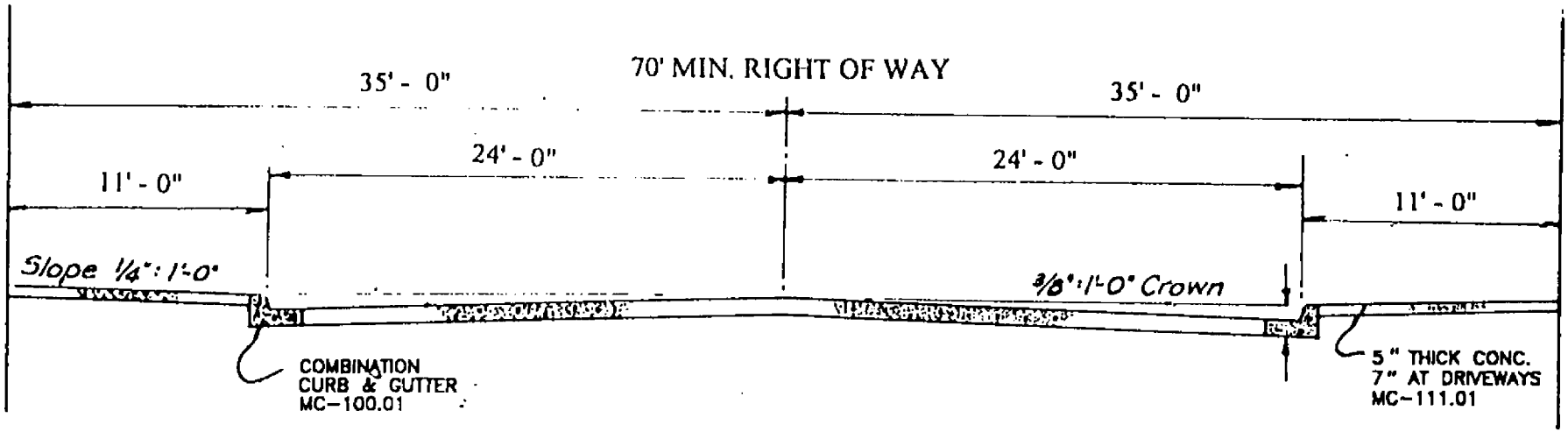
c. Paving. Paving shall be of the required width and conform to City standards and specifications for business district, primary or secondary residential roads according to the particular class in which the road has been placed;

d. Curbs and Gutters. Curbs and gutters shall be built on both sides of each roadway of a dual lane road in accordance with standards and specifications applicable to the particular classification in which the dual lane road has been placed;

e. Sidewalks. Sidewalks shall be built on each side of a dual lane road on the side of the respective roadway upon which

ATTACHMENT 4

85



3" BITUMINOUS CONCRETE SURFACE COURSE IN TWO 1 1/2" LAYERS
7" BITUMINOUS CONCRETE BASE COURSE
8" GRADED AGGREGATE BASE COURSE IN TWO LAYERS
APPROVED SUBGRADE

3" BITUMINOUS CONCRETE SURFACE COURSE IN TWO 1 1/2" LAYERS
9" BITUMINOUS CONCRETE BASE COURSE IN TWO 4 1/2" LAYERS
4" GRADED AGGREGATE BASE COURSE
APPROVED SUBGRADE

ALTERNATE PAVING SECTIONS

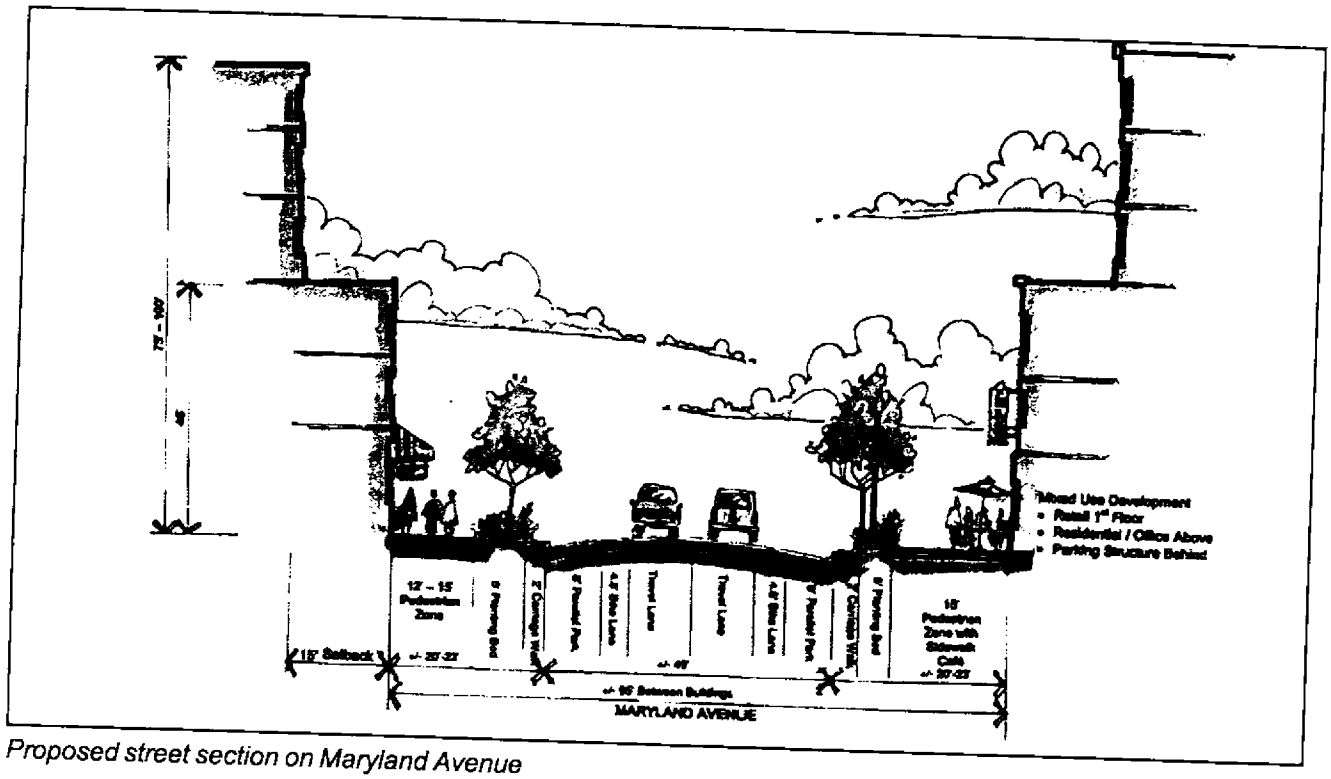
Note: Any asphalt course that exceeds 4" in thickness MUST be applied in two courses or layers.

10/97
REVISION
DETAIL

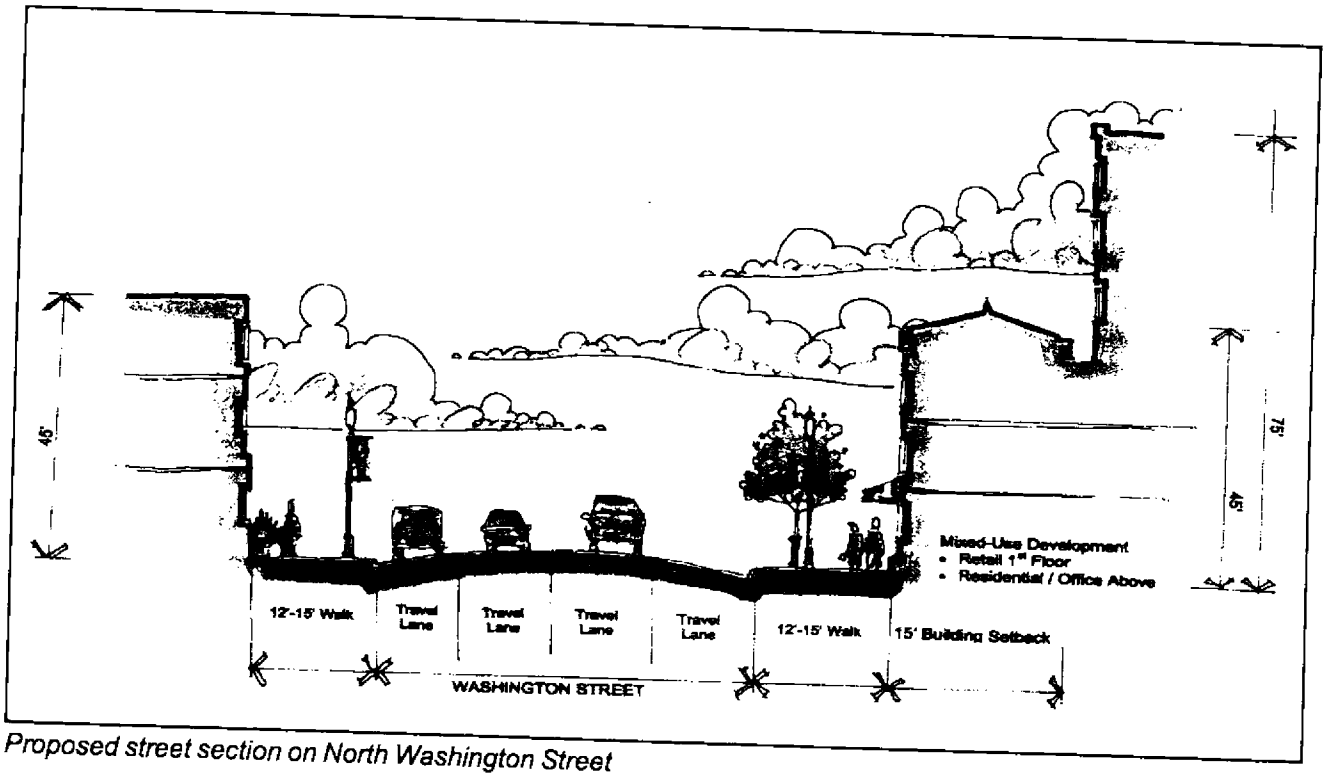
APPROVED BY: _____
Joseph Cutro - Chief Engineer/Transportation

BUSINESS DISTRICT ROAD

70' MIN. RIGHT OF WAY



Proposed street section on Maryland Avenue



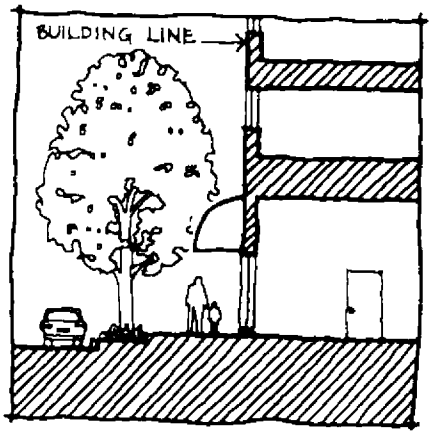
Proposed street section on North Washington Street

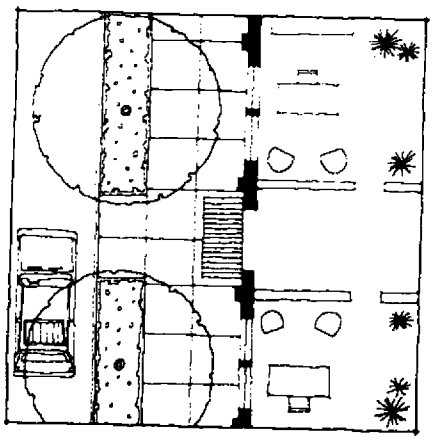
ATTACHMENT 6

RPC URBAN DESIGN GUIDELINES

BUILDING LINE AT SECONDARY STREETS

Place the lower floors of buildings at the building line or alternate building line and orient retail uses and services to the street. Create interest at the pedestrian level with landscaped setbacks, public amenities, awnings, plazas and other devices. Where the building line is not coincident with the Right-of-Way line the building line shall accomodate the streetscape standards.





STREETSCAPE STANDARDS

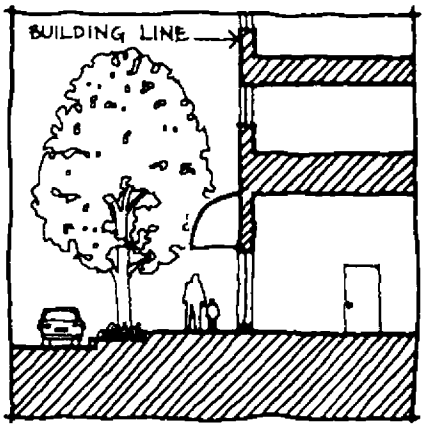
The pedestrian environment should be made safe, convenient and attractive along secondary streets. To achieve this, the standard streetscape features a 5' wide tree planting strip along the roadway and a 10' wide sidewalk at the building edge. Street trees shall be planted approximately 30' o.c. and not more than 40' apart. Trees shall be selected from the list of "Acceptable Trees for Street Planting in the City of Rockville, MD" and at the time of planting shall be a minimum of 3.5" in caliper and 15' high.

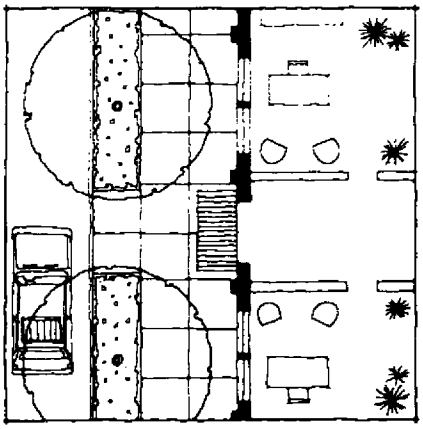
87

TWINBROOK URBAN DESIGN GUIDELINES

BUILDING LINE AT SECONDARY STREETS

— — — — Place the lower floors of buildings at the building line or alternate building line and orient retail uses and services to the street. Create interest at the pedestrian level with landscaped setbacks, public amenities, awnings, plazas and other devices. Where the building line is not coincident with the Right-of-Way line, the building line shall accomodate the streetscape standards. Consult the Functional Plans and Sections for location and site-specific information.



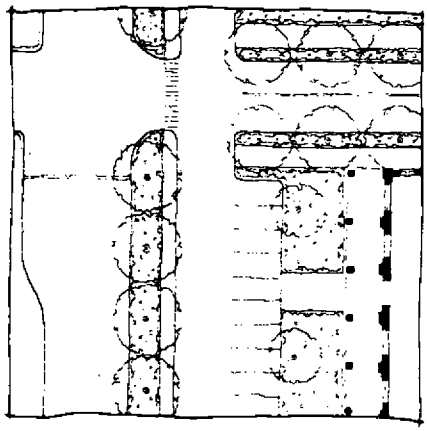


STREETSCAPE STANDARDS

The pedestrian environment should be made safe, convenient and attractive along secondary streets. To achieve this, the standard streetscape features a 5' wide tree planting strip along the roadway, and a 10' wide sidewalk at the building edge. Street trees shall be planted approximately 30' o.c. and not more than 40' apart. Trees shall be selected from the list of "Acceptable Trees for Street Planting in the City of Rockville, Maryland", and at the time of planting shall be a minimum of 3.5" in caliper and 15' high.

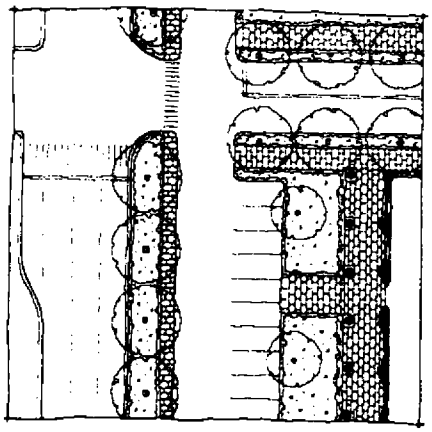
TWINBROOK URBAN DESIGN GUIDELINES
ROCKVILLE PIKE STREETSCAPE

Provide a consistent visual image along Rockville Pike. A pleasant pedestrian environment can be achieved by lining the street level with arcades and retail stores that adjoin the sidewalk and by following the Streetscape Requirements, City of Rockville Sign Ordinance, and Access Management Plan.



BASE LEVEL DEVELOPMENT

The streetscape treatment includes a landscaped berm with trees at the road edge, a 6' wide concrete sidewalk and a service drive. Maintain the build-to line at a distance of 135' from the centerline of Rockville Pike to provide a consistent visual image. Street trees shall be a minimum 3.5 inches in caliper, 15' high, and planted no more than 30' apart.

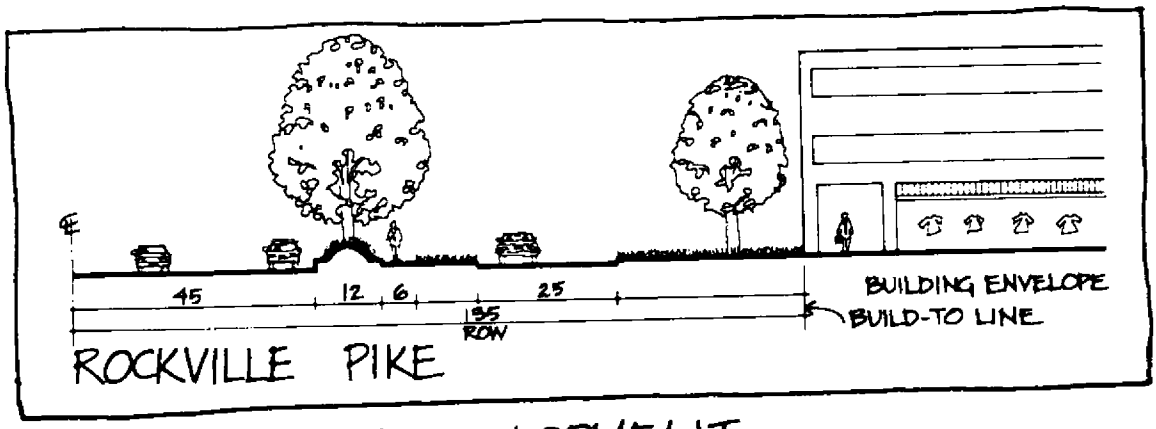


OPTIONAL METHOD DEVELOPMENT

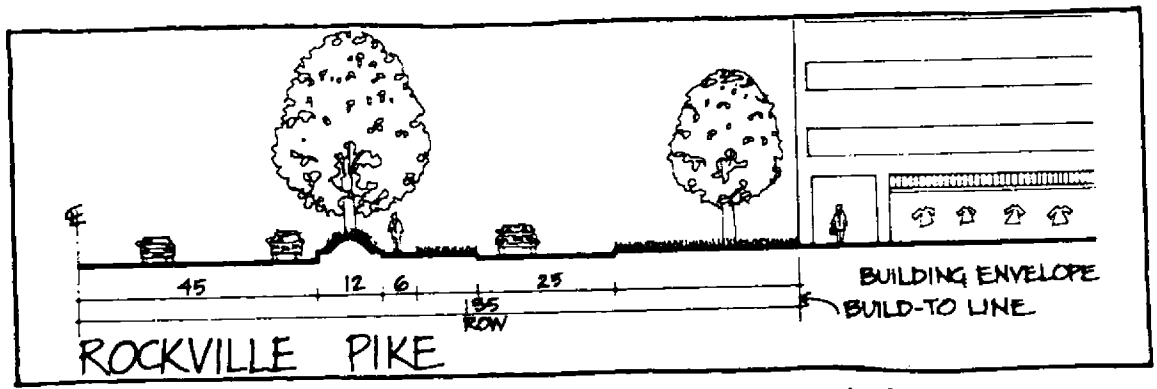
In addition to the minimum requirements stated above, optional method developments shall include the following:

- splash block at Rockville Pike curb edge
- London walk pavers
- additional berm landscaping
- tree bed with landscaping at building edge

89



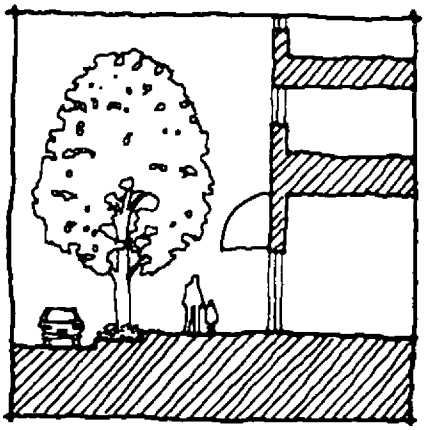
BASE LEVEL DEVELOPMENT

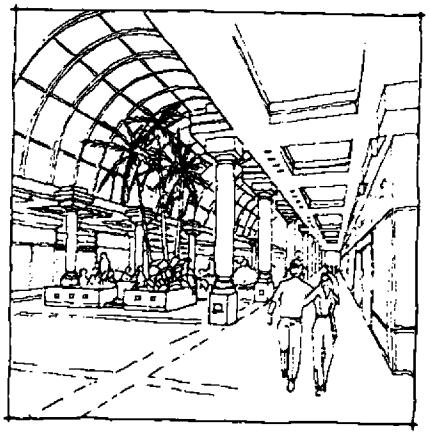


OPTIONAL METHOD DEVELOPMENT

PUBLIC PEDESTRIAN WAY

○○○○○○ Provide a public pedestrian way allowing through-site circulation accessible to the public. Orient retail uses to pedestrian way to enliven the circulation route. Pedestrian ways, enclosed or open to the sky, are enhanced by utilizing arcades, colonnades, awnings, open spaces, plazas, entrance lobbies, landscaping, and public amenities. All of these elements are not expected to be used concurrently, rather the following examples serve as a catalogue of devices that lend an appropriate scale to ground floor retail uses and create a more pleasant pedestrian environment.





BASE ELEMENTS

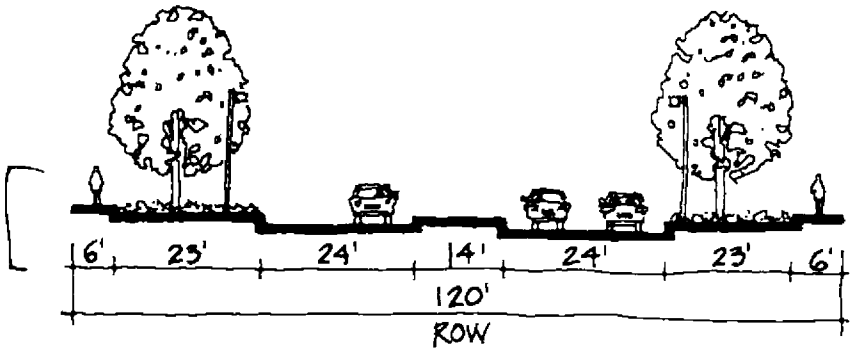
The Public Pedestrian Ways provide a pleasant link between the Metro, office, retail establishments, and the surrounding residential areas. Locate retail and commercial activity adjacent to the pedestrian way to enliven the space and provide a 10' wide sidewalk and adequate lighting to enhance pedestrian safety. Plant street trees and landscaping in or adjacent to the pedestrian way in accordance with the following devices.

91

TWINBROOK URBAN DESIGN GUIDELINES

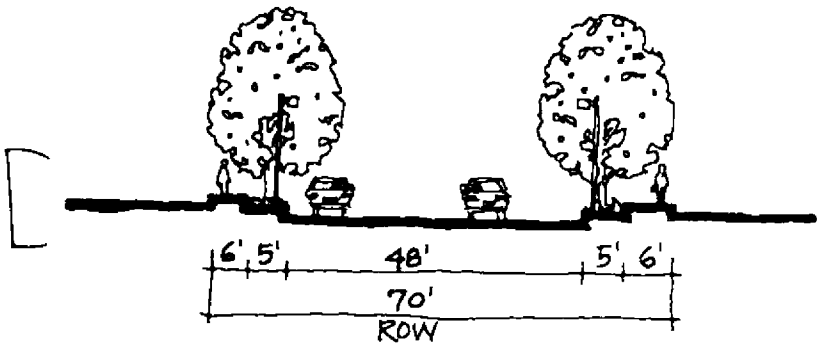
PUBLIC ROADWAYS

Vehicular movement is enhanced by improving the existing roadway network in the Rockville Pike Corridor. These improvements offer more options to motorists, increase the efficiency of local circulation, improve access to properties, and decrease intersection congestion. All developments within the Rockville Pike Corridor that dedicate a public right of way or easement for improvements shown in the Plan may include the dedicated area in the net lot area for the purpose of calculating F.A.R. The following roadway standards are required for dedication and construction of new roads in the City:



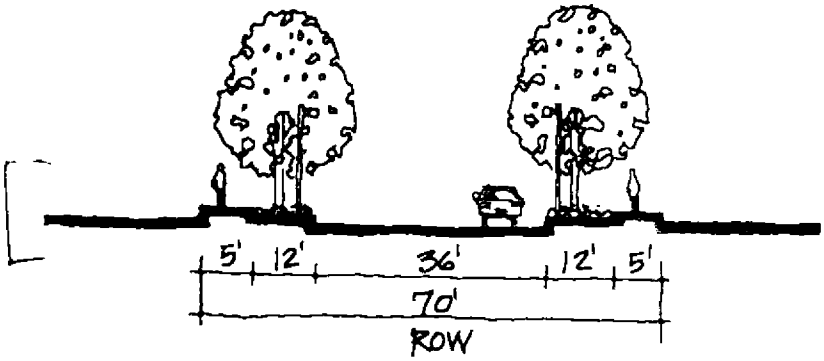
ARTERIAL

Arterial roads are built in a right-of-way at least 120' wide, containing two 24' paved sections separated by a 14' median strip. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.



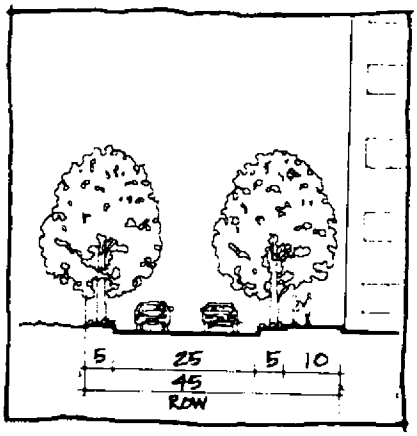
BUSINESS DISTRICT

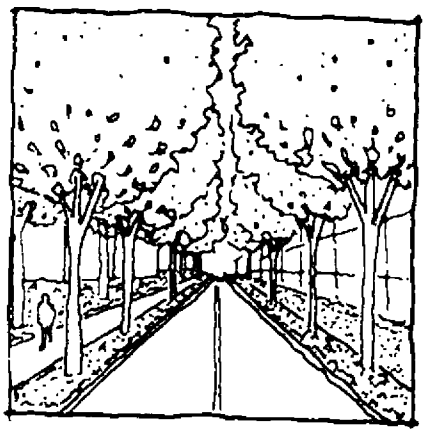
Business district roads are built in a right-of-way at least 70' wide, containing a 48' pavement width. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.



PRIMARY RESIDENTIAL

Primary residential roads are built in a right-of-way at least 70' wide containing a minimum pavement width of 36' for vehicular traffic. Curbs, gutters, sidewalks, lighting and landscaping also must be provided.

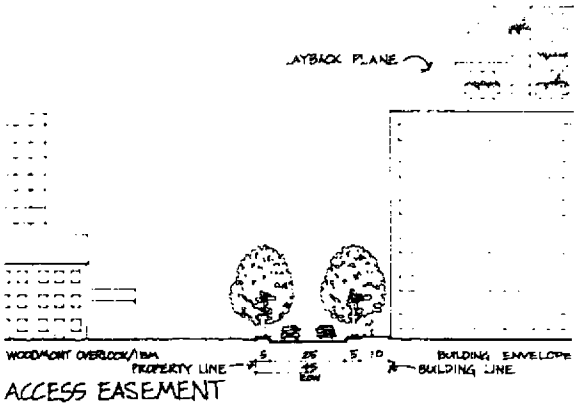




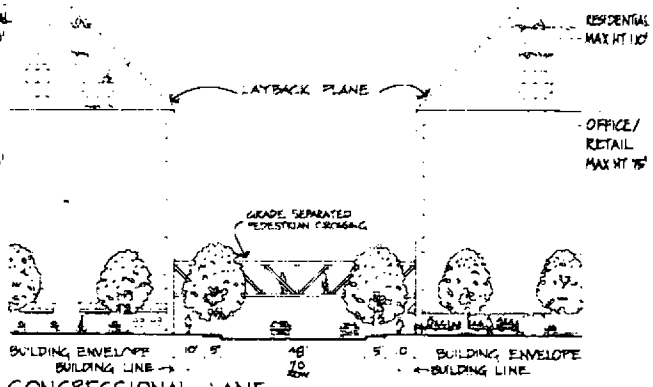
ACCESS EASEMENT

The roadway allows vehicular and pedestrian access to the interior of the site and provides a transition between residential and commercial/mixed uses. Access easement includes a 25' two-lane roadway, flanked on both sides by 5' continuous landscape strips with trees, and a 10' sidewalk on the south side. No setbacks from the sidewalk are required, however if one is provided it shall be a minimum of 15' and include an additional row of trees and landscaping adjacent to new buildings.

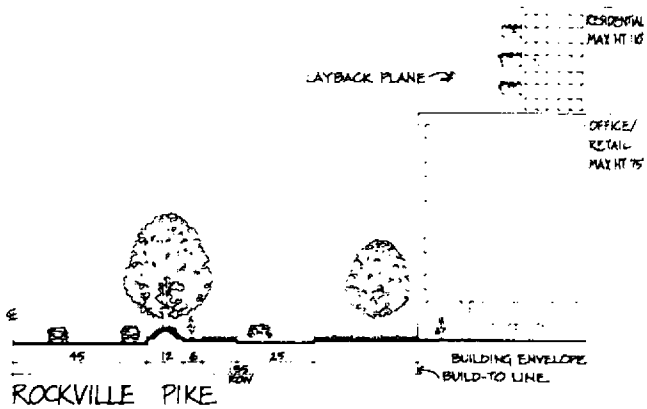
93



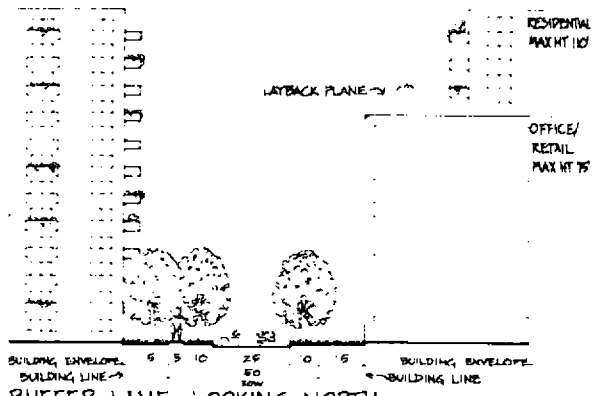
ACCESS EASEMENT



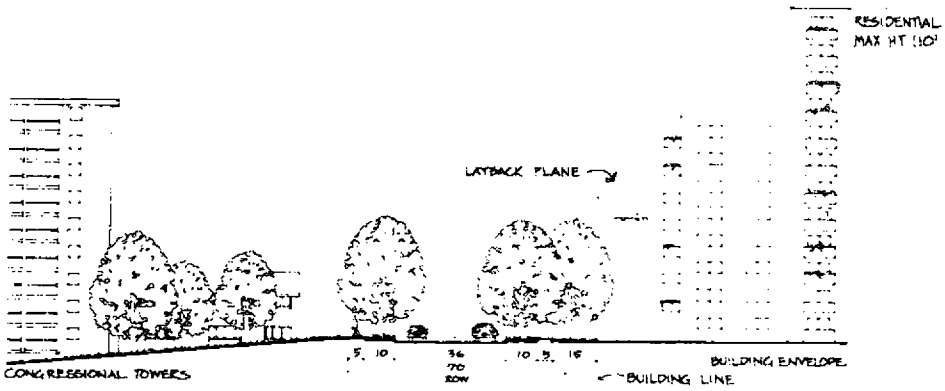
CONGRESSIONAL LANE



ROCKVILLE PIKE



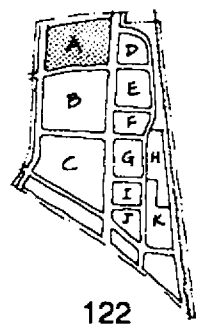
BUFFER LANE LOOKING NORTH

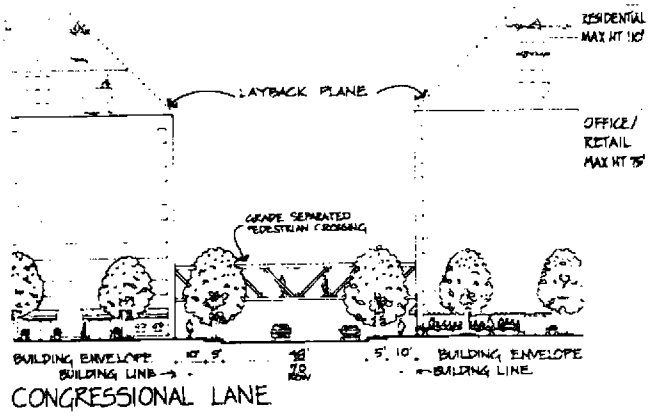


JEFFERSON STREET LOOKING NORTH

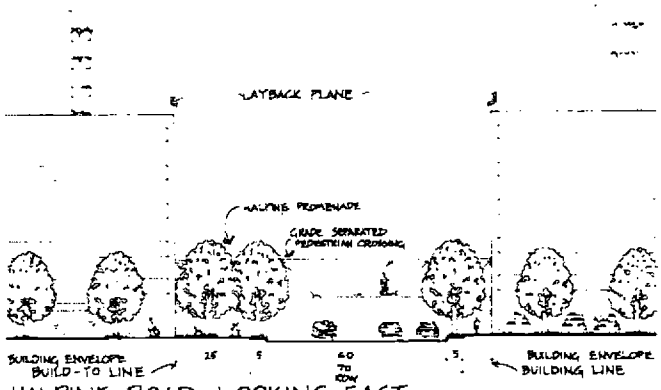
TWINBROOK METRO AREA

FUNCTIONAL PLAN & SECTIONS: PARCEL A

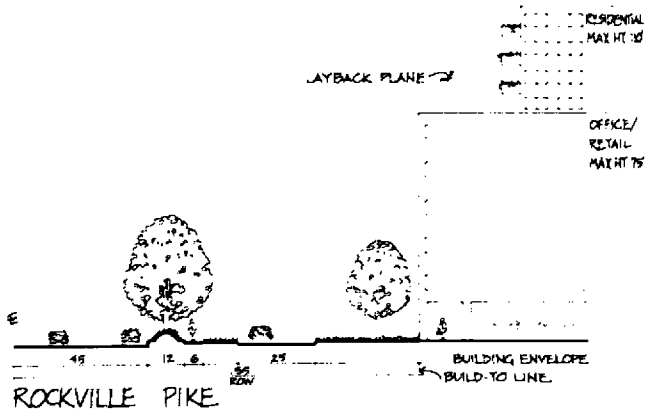




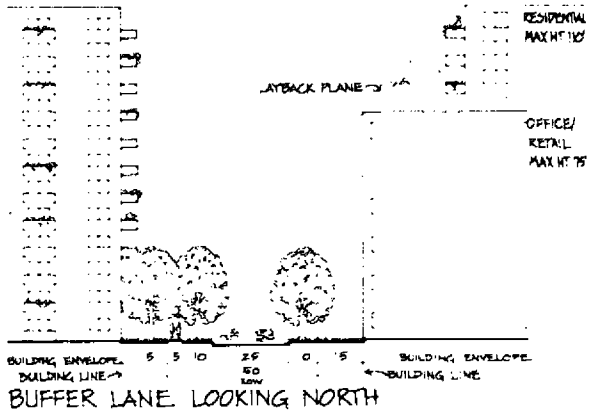
CONGRESSIONAL LANE



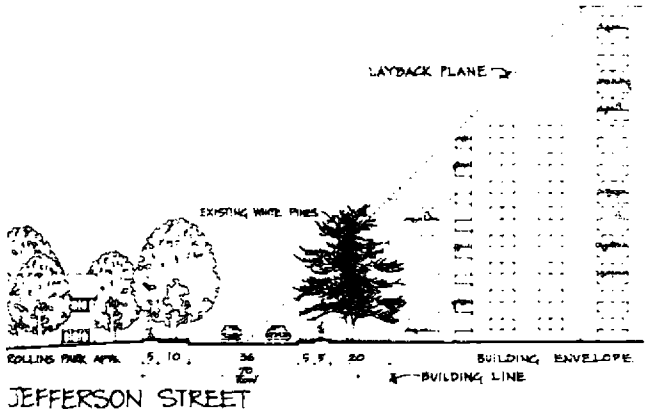
HALPINE ROAD LOOKING EAST



ROCKVILLE PIKE



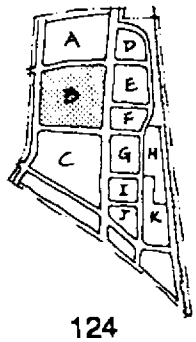
BUFFER LANE LOOKING NORTH



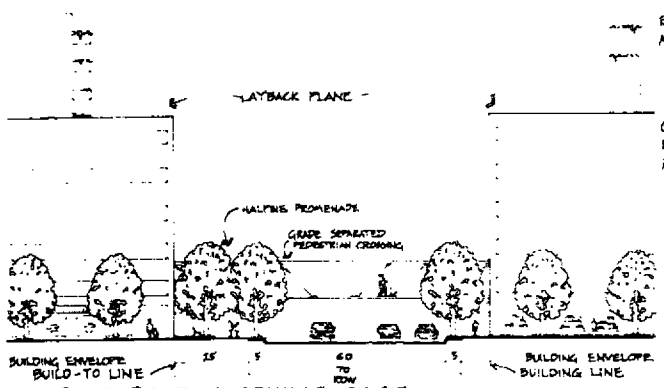
JEFFERSON STREET

TWINBROOK METRO AREA

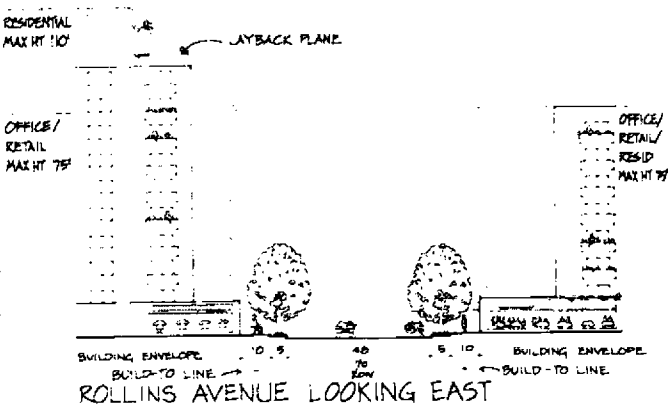
FUNCTIONAL PLAN & SECTIONS: PARCEL B



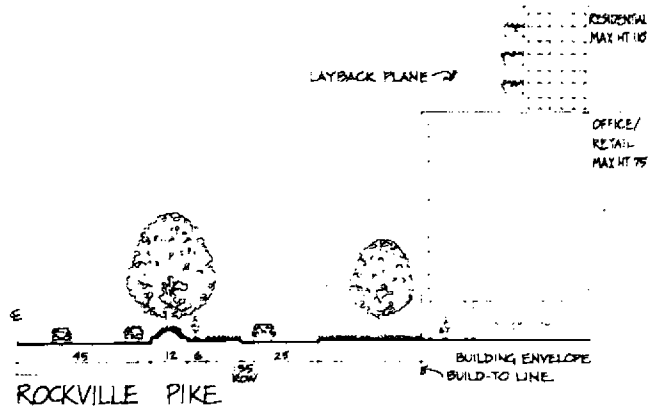
95



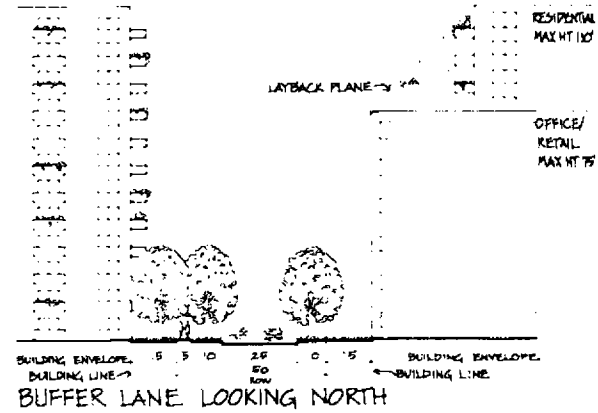
HALPINE ROAD LOOKING EAST



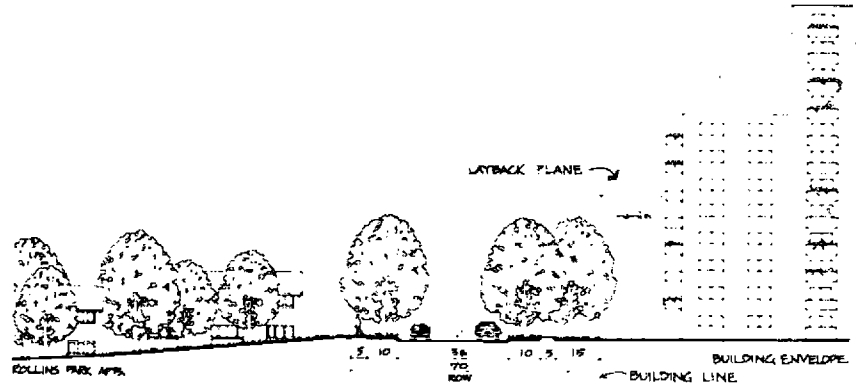
ROLLINS AVENUE LOOKING EAST



ROCKVILLE PIKE



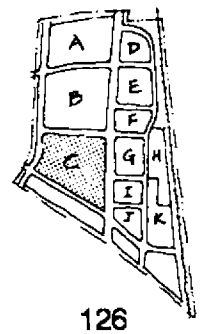
BUFFER LANE LOOKING NORTH

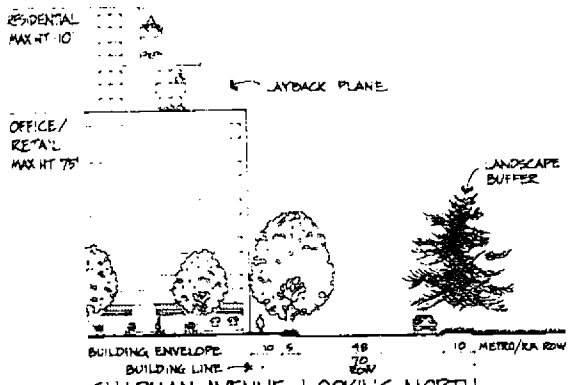


JEFFERSON STREET LOOKING NORTH

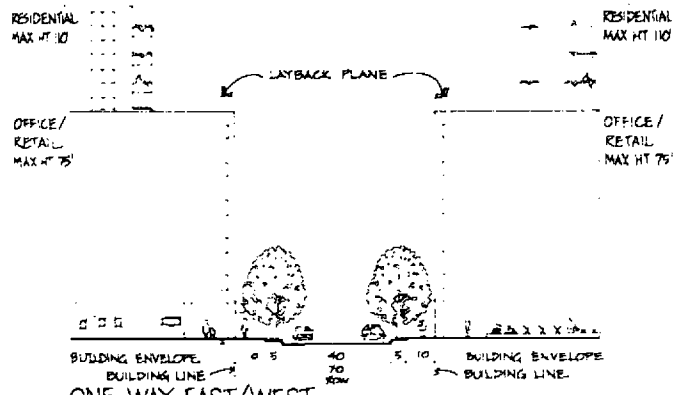
TWINBROOK METRO AREA

FUNCTIONAL PLAN & SECTIONS: PARCEL C

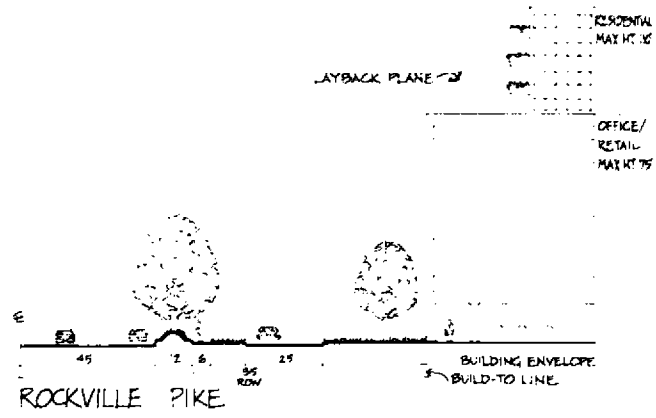




CHAPMAN AVENUE LOOKING NORTH



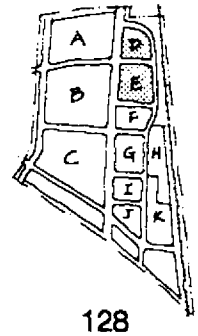
ONE WAY EAST/WEST

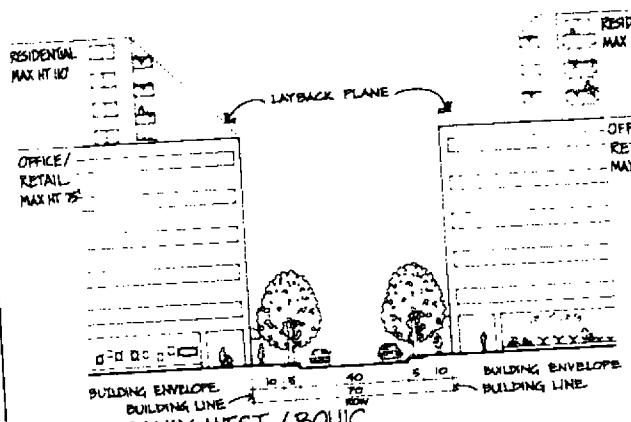


ROCKVILLE PIKE

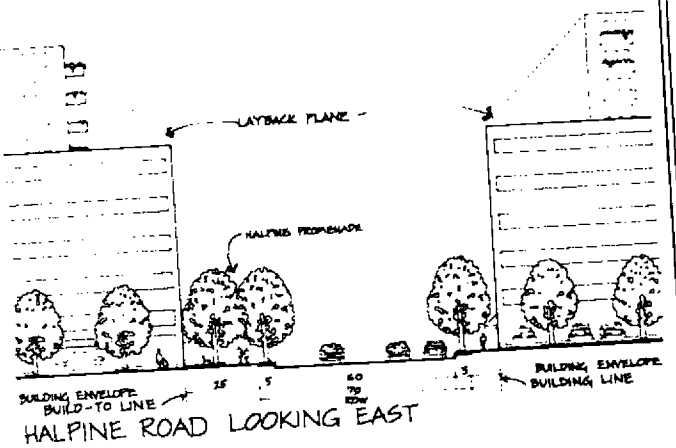
TWINBROOK METRO AREA

FUNCTIONAL PLAN & SECTIONS: PARCEL D, E

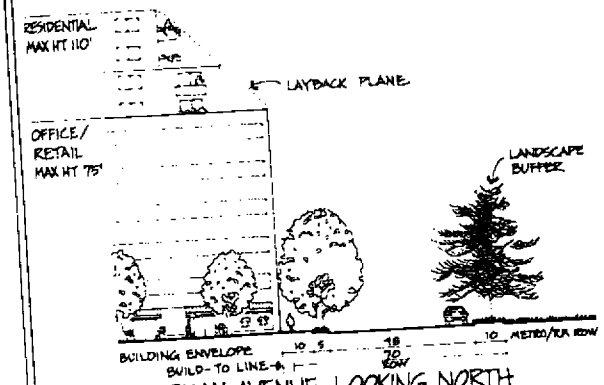




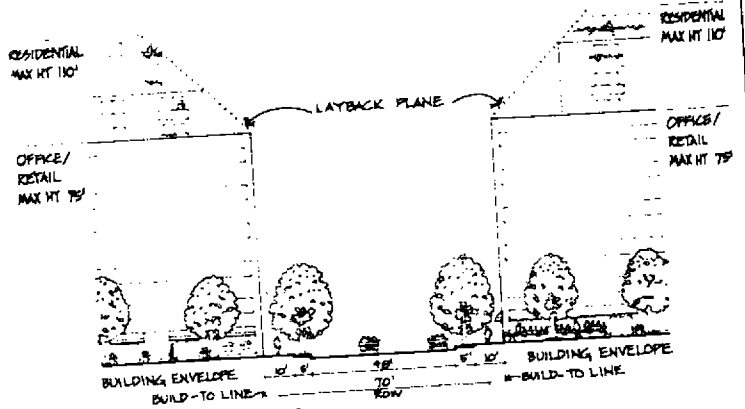
ONE WAY WEST / BOUIC



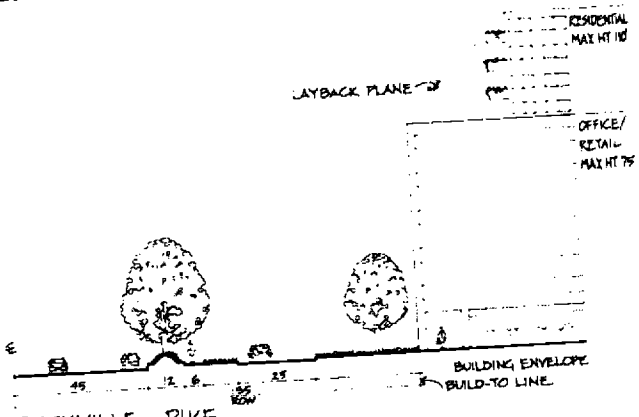
HALPINE ROAD LOOKING EAST



CHAPMAN AVENUE LOOKING NORTH



CHAPMAN AVENUE

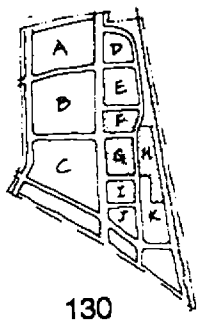


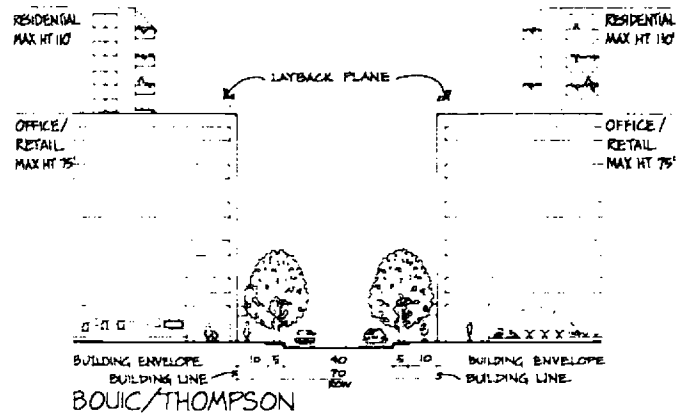
ROCKVILLE PIKE

98

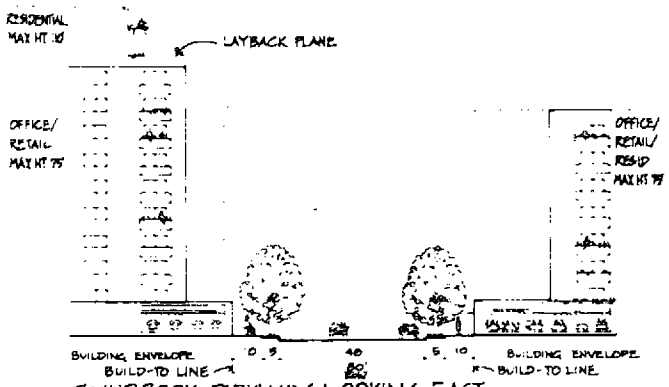
TWINBROOK METRO AREA

FUNCTIONAL PLAN & SECTIONS: PARCEL F, G, H

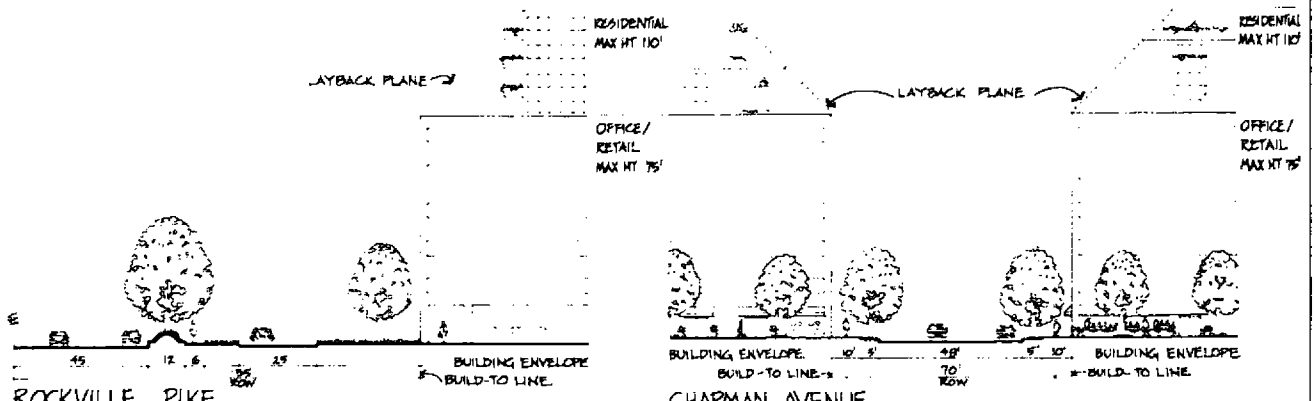




BOUIC/THOMPSON



TWINBROOK PARKWAY LOOKING EAST

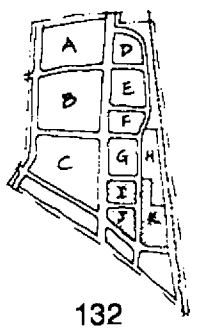


ROCKVILLE PIKE

CHAPMAN AVENUE

TWINBROOK METRO AREA

FUNCTIONAL PLAN & SECTIONS: PARCEL I, J, K



ATTACHMENT 7

The existing 60-feet wide right-of-way for North Stonestreet Avenue will need to be expanded to accommodate the new cross-section of the roadway. The roadway will include a landscaped median with a minimum width of eight to ten feet, one travelway in each direction, on-street parking spaces on both sides of the street, and a wide pedestrian zone of approximately 20 feet, including street tree planting areas and pedestrian walkways. This will necessitate a right-of-way width of approximately 85 feet.

At the north end, a smaller-scale traffic circle should be constructed between Howard Avenue and Lincoln Avenue to clearly delineate the end of the mixed-use area and the beginning of the residential neighborhood. The circle also has the function of providing an easy turnaround for the proposed shuttle to run along the Stonestreet corridor.

South Stonestreet Avenue is currently a four-lane undivided roadway with a 65-feet right-of-way. It may be possible and desirable to upgrade the cross-section to include a landscaped median and 20-feet wide sidewalks, particularly on the Metro station side. Any upgrades to South Stonestreet Avenue should preserve the existing mature trees along the Metro station frontage. A traffic circle at the intersection of Baltimore Road and South Stonestreet Avenue may also be desirable to funnel Metro-bound traffic into the station and away from residential streets.

Responsibility: This project should be implemented primarily by the City of Rockville in acquiring property for the rights-of-way. However, the City could potentially partner with others, including but not limited to, private developers for the redevelopment of the residual land into the type of structures that are desired.

2. Pedestrian Promenade Extensions

   a. Metro Site Extension

   Priority: within 5 years; tied to redevelopment of the Metro station

   Project Description: The extension of the pedestrian promenade originating in the Town Center is a key public improvement recommended by the Plan. As recommended in the *Town Center Master Plan*, the promenade will function as an efficient pedestrian link between the station and Town Center. It would connect to the Metro platform at a level above the tracks, and would transition down to the existing promenade between 255 Rockville Pike and 51 Monroe Street in Town Center via a series of grade changes in the form of a public plaza. On the East Rockville side of the Metro station, the grade changes would have to be accomplished via a stair and elevator tower, which could become a key architectural element on the East Rockville side of the station. This could be a

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ATTACHMENT 8
BIKEWAY MASTER PLAN

5.B.4. Shared-Use Path

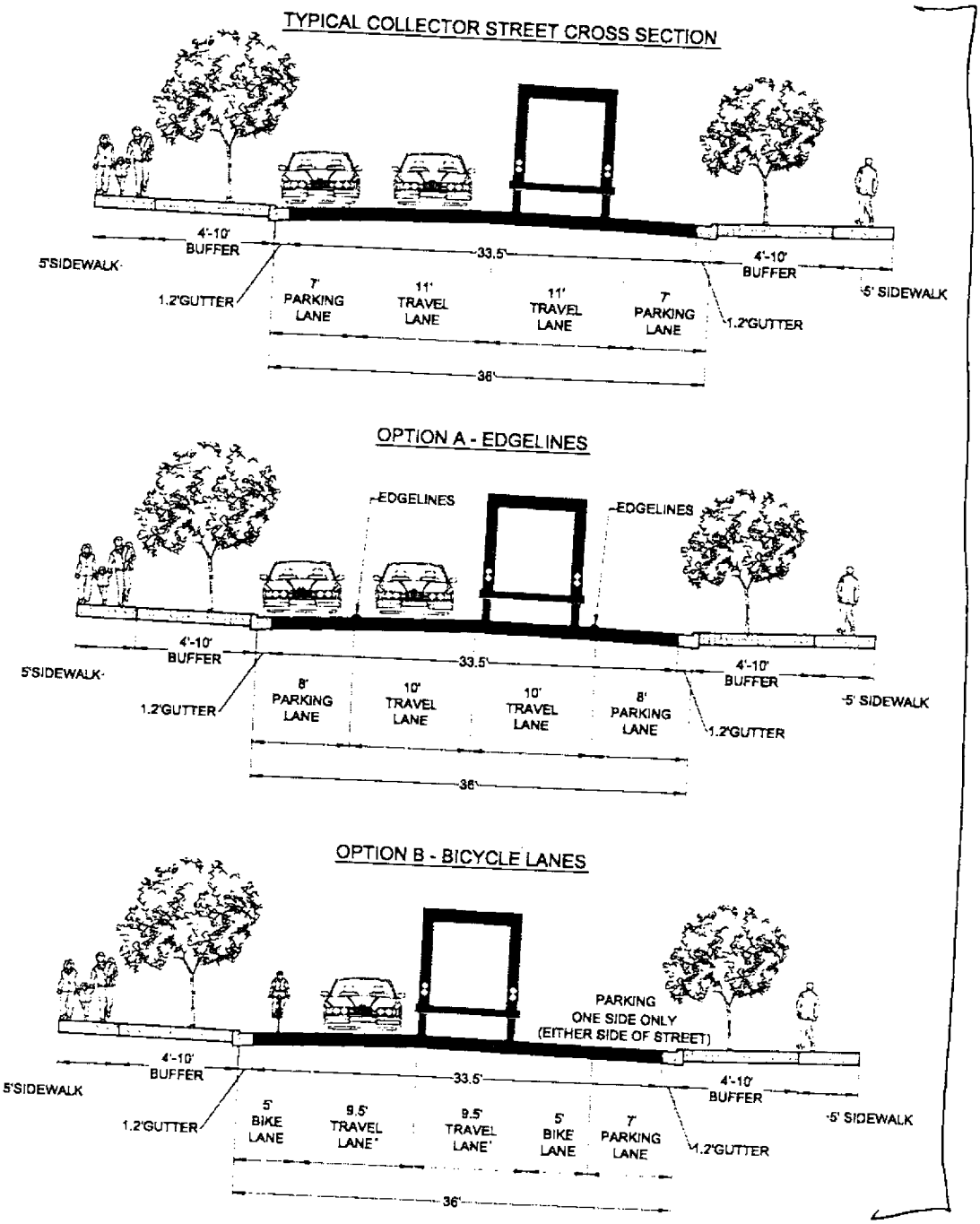
Shared-use paths are facilities on exclusive right-of-way with minimal cross flow of motor vehicles. Often referred to as trails, shared-use paths are intended to accommodate various non-motorized users including bicyclists, in-line skaters, walkers, runners, people with strollers, wheelchair users and dog walkers. These facilities are most commonly designed for two-way travel. The recommended minimum width for a shared-use path is 10 feet. In Rockville, there are many opportunities to widen sidewalks to 10 feet so that they serve as shared-use paths. Right-of-way constraints, such as utility poles, trees, ditches, and buildings and environmental constraints, such as wetlands and stream buffers, should be considered at potential sidepath locations. Where space is constrained, an 8-foot path width may be acceptable. Ideally, some buffer space is provided between the road and the sidepath, but right-of-way constraints may force the shared-use path to be constructed next to the curb. In these cases, the full shared-use path width is more important than the buffer.

Rockville should provide shared-use paths in parts of the bikeway network where there is heavy, fast traffic. Shared-use paths should not be used to preclude on-road bicycling but rather to supplement a system of on-road bicycle facilities. Shared-use paths that are adjacent to roadways can provide separation from heavy, fast-moving traffic and create more comfortable riding conditions, especially for less experienced cyclists. They can also be used to provide space for pedestrians and to serve schools. However, shared-use paths in the roadway right-of-way are less desirable when the roadway corridor has many driveways and intersections. Cyclists riding in the opposite direction of motor vehicle traffic and approaching from the right side of right-turning vehicles from intersecting streets and driveways (drivers look left) often come in conflict with these vehicles. In corridors with fewer driveways and intersections, these conflicts are less of a problem. For information on other design elements of shared-use paths, designers should refer to the AASHTO Guide.

5.B.5. Intersection Accommodation

Rockville should provide crosswalks, pedestrian/bicycle push-buttons and signals, median refuges and use tight turning radii to improve the safety and comfort of bicyclists at intersections. Due to the conflicts between motor vehicles and bicycles at intersections, special care and treatment must be provided at these locations. The AASHTO Guide and the MUTCD have recommendations on how to sign and stripe bike lanes at various types of intersections.

Figure 5. Alternative 36-foot Cross-Sections



*An engineering study should be done to determine the feasibility of providing narrow (9.5') travel lanes. This solution is generally appropriate on streets with slower speeds

F. Completion of the Baltimore Road bicycle path between the Millennium Trail and Rock Creek Regional Park

Rockville should complete the Baltimore Road shared-use path so bicyclists can ride between the Millennium Trail and the eastern edge of the City. To do this, a shared-use path should be constructed along Baltimore Road between the First Street section of the Millennium Trail and the western terminus of the existing Baltimore Road shared-use path (at Gladstone Drive). This section is a critical connection because it completes a connection between the center of the City and Civic Center Park, Rockville High School, Meadow Hall Elementary School and Rock Creek Regional Park. The completed Baltimore Road bicycle path will also serve neighborhoods on the east side of Rockville.

The City should also support the construction of a new path at the east end of Baltimore Road that connects Norbeck Road (MD 28) with the existing trail near Rock Creek. This section of path is immediately outside the City limits. Though there is an existing path in this area, the current facility is substandard and should be widened to 10 feet. Sections of trail that pass through environmentally-sensitive lands, such as the Rock Creek floodplain should undergo special study before widening.

Rockville should designate Twinbrook Parkway as a signed-shared roadway and possibly include bike lanes to direct bicyclists from Veirs Mill Road (MD 586) to the shared-use path on Baltimore Road. In addition, a shared-use path should be added to Avery Road to connect to the existing path on Norbeck Road (MD 28) and provide access to Rock Creek Park.

G. Connection of Northeast Rockville to the Rockville Metro Station and Town Center

All of Lincoln Park and Northeast Rockville are within easy bicycling distance of the Metro station and the Town Center. North Stonestreet Avenue, North Horners Lane, Loftstrand Lane, Taft Street and Southlawn Lane should be designated as signed-shared roadways. The east-west connection under the railroad tracks at Park Road is critical for bicyclists. In the short-term, the City should also install new curb ramps leading to the 7.5-foot sidewalks directly below the railroad bridge. Ultimately, shared-use paths should be added to both sides of the road between Hungerford Drive (MD 355) and Stonestreet Avenue. These improvements will make bicycling to destinations in downtown Rockville more attractive to neighborhood residents.

H. Provision of Connections within Hungerford, Stoneridge and New Mark Commons

Bikeway linkages are needed to improve access to destinations such as Dogwood Park and Richard Montgomery High School in the Hungerford, Stoneridge and New Mark Commons neighborhoods south of Town Center. A shared-use path should be constructed along the south side of Fleet Street to provide access to the high school. In addition, a shared-use path should be included when Fleet Street is extended from Mount Vernon Place to Ritchie Parkway. In the future, the City should provide a shared-use path on the south side of the section of West Edmonston Drive between Wootton Parkway and MD 355. In the interim, the roadway should be designated as a signed-shared bike route. These improvements would be part of a potential

In the long-term, the City should explore the possibility of providing a major trail through Town Center, similar to the Georgetown Branch and Capitol Crescent Trails through downtown Bethesda.

D. Study of the provision of shared-use paths on both sides of Maryland Avenue between East Jefferson Street and Great Falls Road (MD 189)

The City should study the impacts of providing shared-use paths on both sides of Maryland Avenue between Jefferson Street (MD 28) and Great Falls Road (MD 189). Because it would serve as part of a regional bikeway network, the section between Jefferson Street (MD 28) and Fleet Street should be constructed first. In this section the shared-use paths would also improve bicycle access to Rockville City Hall, the Rockville Library, and the Montgomery County Council Office Building. These paths could be created by widening the existing sidewalks to 10 feet. Though there are no walls or steep slopes preventing this expansion, the City should consider impacts on existing signs and light poles. If additional space is needed to create the shared-use paths, the City should study narrowing the total roadway width by three to four feet, and striping 10 foot motor vehicle lanes. This would have the additional benefit of slowing both through and turning traffic in this pedestrian-oriented area of the City.

The section between Fleet Street and Great Falls Road (MD 189) should also be served by a shared-use path due to the heavy, fast traffic. The sidewalk in this section may be more difficult to expand because of utility poles, landscaping, and steep slopes close to the sidewalk. Further study will be needed to determine if this solution is feasible.

E. Study of bicycle facility alternatives along Veirs Mill Road (MD 586)

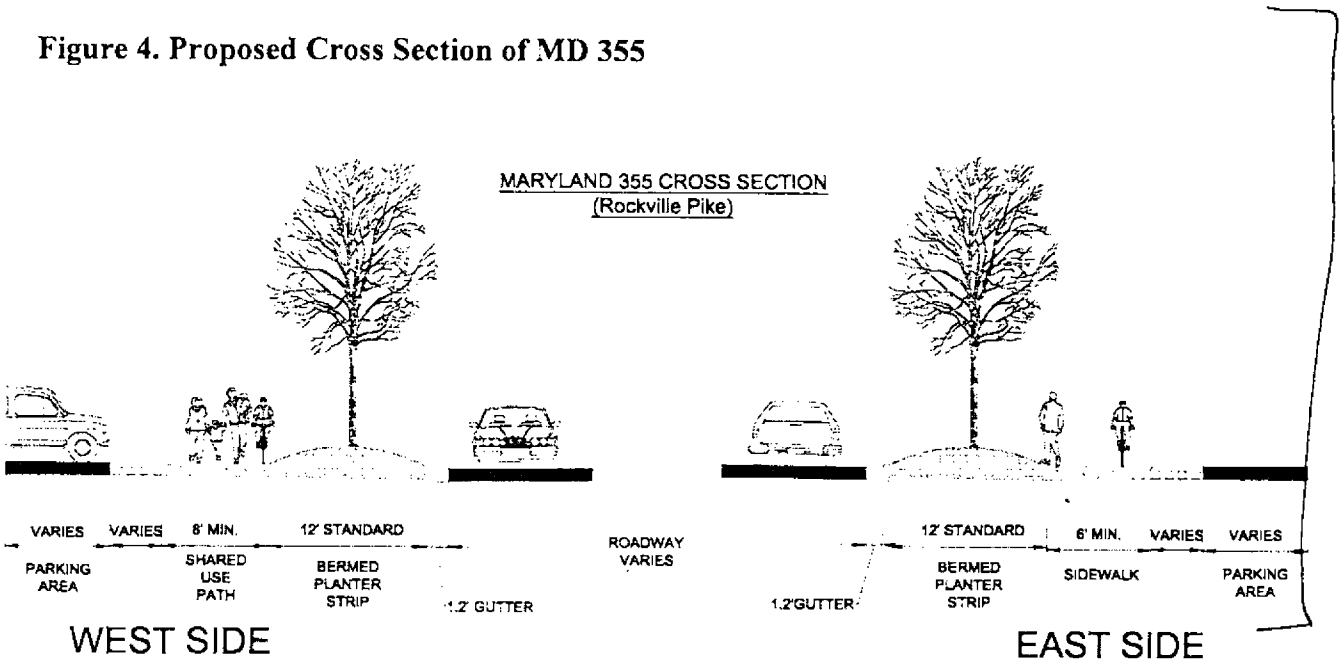
The City should provide bicycle facilities on both sides of Veirs Mill Road (MD 586). Like MD 355, the current configuration of MD 586 serves high volumes of motor vehicle traffic with little or no separation for bicyclists. Bike route signs should be added along the service roads between Gail Avenue and Bradley Avenue to encourage bicyclists to use these low-volume, low-speed streets as an alternative to Veirs Mill Road. Shared-use paths should be constructed on both sides of the roadway from the ends of the service roads to extend the bikeway west to First Street Trail and east to Twinbrook Parkway. The section of Veirs Mill Road east of Twinbrook Parkway should have shoulder bike lanes to connect the City's shared use paths to the Rock Creek Park bike trail. In the long-term, shared-use paths should be extended east from Twinbrook Parkway beyond the City limit. In the future, the City should explore the possibility of constructing a shared-use path between the intersection of Veirs Mill Road and First Street and the Rockville Metro Station.

Sections of these shared-use paths and bike lanes can be added as redevelopment occurs. A bikeway along this route will provide residents on the east side of the City with a direct route to Town Center.

355 right-of-way on the north side of the City, but signs would direct bicyclists interested in Town Center to bike lanes on the new section of Dawson Avenue and a signed-shared route on Maryland Avenue. Bicyclists could continue south on new shared-use paths on Maryland Avenue south of Jefferson Street and on Fleet Street and Edmonston Drive before returning to Rockville Pike. This regional bikeway network would connect to a new shared-use path on the west side of MD 355 in Gaithersburg and the North Bethesda Trail on the south side of Rockville.

Alternative regional bikeway routes parallel to MD 355 have been explored, and they are not feasible at this time. In the future, any redevelopment projects in the corridor should consider accommodating bikes to help provide a clear and direct north/south connection along MD 355.

Figure 4. Proposed Cross Section of MD 355



C. Provision of bicycle access within Town Center

New streets in the Town Center area will improve bicycle access for residents and visitors to downtown Rockville (Figure 3). The City should proceed with plans to provide bike lanes on the new sections of Dawson Avenue and on the reconstructed Beall Avenue and Middle Lane. The City should also provide bike lanes on Market Street when it is constructed. In addition, a shared-use path is recommended on the east side of North Washington Street to increase the comfort of bicyclists riding between the Post Office and Giant Food Store area and Town Center. Widening the sidewalk along the roadway to serve two-way bicycle traffic could provide an alternative connection between the MD 355 corridor regional network bikeway and Town Center. Both Maryland Avenue and Monroe Street should be designated as signed-shared roadways. Maryland Avenue should have special signs showing bicyclists in the MD 355 corridor to use the street to access destinations in Town Center.

Objective 1.1. Install the bike paths, lanes, signs, crossings, signals and other facilities recommended on the Rockville Bicycle Facilities Recommendations map.

The City has already constructed many miles of shared-use paths, striped bike lanes and signed bicycle routes that provide bicycle access around Rockville. Developers are required to build bike facilities through the Adequate Public Facilities Ordinance. The core of the Rockville Bikeway Network is taking shape, and a number of facilities should be constructed to increase the density and connectivity of the network. These projects are shown on the Rockville Bikeway Recommendations map (Figure 2). Several of the following projects are under construction or have received funding for design and construction and are considered complete.

A. Completion of the Millennium Trail

Originally referred to as the "Bicycle Beltway", the Millennium Trail continues to be a high priority project for the City. Significant progress has been made toward completion of the trail since the 1998 Plan was adopted. The only section of trail that remains to be completed is between Gude Drive and Edmonston Drive (across MD 355 and MD 586). The City received funding to design this section of trail in November 2002. When complete, this trail connection will provide a safe, convenient crossing of two major highways and will help facilitate east-west access across the City.

The City should continue to support the efforts of Montgomery County to improve and maintain the section of the Millennium Trail on East Gude Drive. This part of the 10-mile loop trail serves as an east-west connection on the north side of Rockville, but it is outside the City limits.

B. Development of a Regional Bikeway Network within the MD 355 Corridor

Rockville should provide bicycle access throughout the MD 355 corridor. Ultimately, an 8-foot-wide shared-use path (wide concrete sidewalk) should be constructed on the west side of MD 355 (Rockville Pike, Hungerford Drive and Frederick Road) to serve both pedestrians and bicyclists. The east side of the road should have a 6-foot sidewalk. In many ways, MD 355 operates as Rockville's "Main Street". It is also in important route for providing regional connectivity through Rockville. Numerous commercial and retail establishments are located along the street and could be accessed more safely and conveniently by bicycle if better accommodations were in place. The current configuration of MD 355 serves high-speed, high-volume automobile traffic with very little shoulder space and narrow sidewalks. The City should conduct a special analysis to determine the appropriate shared-use path design for each part of the corridor and develop a set of standards for future roadway and land use development in the corridor.

MD 355 can be improved by replacing the existing sidewalks with wider sidewalks that are separated from the roadway and parking lots (see Figure 4). This bikeway would serve Montgomery College, Town Center, Metro, the Convention Center, East Rockville and numerous shopping clusters and office buildings. It would also be within _ mile of two high schools. Safe, convenient road crossings should be provided to access the Rockville and Twinbrook Metro stations. It is likely that the regional bikeway network would be in the MD

ATTACHMENT 9

1. SIDEWALKS

Sidewalks parallel to public streets are the main component in any system of urban pedestrian access. As of June 30, 1993, the City maintained 200 miles of sidewalks adjoining 147 miles of public streets, including State highways.

The City's Subdivision Regulations (Chapter 25, Rockville City Code) and Street Construction Standards (Chapter 21, Rockville City Code) provide the legal basis for Rockville's sidewalk system. These laws require that sidewalks be constructed on both sides of the street in most new subdivisions; in Planned Residential Unit (PRU) developments, specific requirements for sidewalks are prescribed by the Mayor and Council. The City also installs sidewalks on its own roadway projects. On newer arterial streets like Wootton Parkway, practice has been to provide an extra-wide sidewalk/bike path combination on at least one side of the street.

In general, the State Highway Administration (SHA) does not provide for sidewalks, so installation adjacent to State highways in Rockville is almost always the responsibility of the City. Since the mid-1980's, the SHA has been installing some sidewalks in conjunction with new roadway construction, but, similar to other sidewalks along State highways, maintenance remains a City responsibility.

Many streets in Rockville remain without sidewalks, particularly in older neighborhoods. Construction in these areas is made more difficult by such factors as insufficient right-of-way, poorly defined road edge, adverse grading, or private landscaping within the right-of-way. Projects can also be hampered by a lack of support from owners of properties directly adjacent to the proposed sidewalk. Without even considering funding, the goal of "a sidewalk on every street" (see Appendix 1) is expected to be elusive.

As important as the expansion of the sidewalk system is the quality of maintenance for existing sidewalks. Repair or replacement of sidewalks is accomplished both by City forces and by private enterprise under annual City contract. Over the last several years, the City has committed about $300,000 annually to sidewalk repair.

1a. Sidewalk Construction - General

- Along major and arterial streets, sidewalks should be provided on both sides within residential and business areas, and on one side of the street in all other areas.

- Sidewalks should be provided on both sides of business streets, and on at least one side of industrial streets.

→→ - In residential areas, sidewalks should be provided on both sides of primary streets, and on at least one side of secondary streets. Around schools, secondary streets should be provided with sidewalks on both sides.

→→ - For all street classifications, sidewalks should be placed on both sides of the street on routes served by local mass transit.

- All sidewalks shall be at least 4 feet in width, and constructed from hard-surface materials such as concrete, asphalt, or brick. Concrete is to be preferred in residential and business areas generally, with brick being reserved for use in areas of institutional or historical significance. Asphalt should be limited to use in combined pedestrian/bicycle facilities, and for sidewalks of a temporary nature. Asphalt may also be used in place of concrete for pedestrian pathways not adjacent to public streets (see under Exclusive Pedestrian Facilities).

- Sidewalks should be separated from the adjacent roadway by a buffer strip at least three (3) feet wide. This is especially important along high-speed, high volume streets on which vehicle travel occurs adjacent to the curb. Separation can take the form of a grass strip, a protective berm, or a wider sidewalk section that effectively provides a buffer while also supporting traffic control devices, street lighting and landscaping.

→→ - In both new and existing developments, raised pedestrian refuge areas may be provided at intersections and other street crossing points. These refuges can take the form of islands, or peninsular curb extensions ("chokers"). In coordination with sidewalks, chokers are to be particularly encouraged at intersections where both vehicle and pedestrian movements are heavy, and where on-street parking may be desirable.

1b. New Development and Road Construction

- In new subdivisions, sidewalks shall be constructed on both sides of each street.

- In PRU developments, sidewalks should be constructed on both sides of each street, with specific requirements for sidewalks and other walkways to be determined by the Mayor and Council.

- In the Town Center, sidewalks shall be provided on both sides of each street, and shall be constructed in compliance with the design criteria contained in the Town Center Urban Design Plan.

- In conjunction with new roadway construction or major reconstruction, the City should construct sidewalks on both sides of the street within residential areas, business areas, and along routes served by local mass transit. In all other areas, sidewalks should be constructed on at least one side of the street.

- Parallel to arterial streets, the City may provide a wider hard-surface pathway to accommodate bicycles as well as pedestrians. The width of such facilities shall be at least 8 feet, and preferably 10 feet.

→→ - In reviewing plans for construction or reconstruction of State highways, the City should encourage the construction and/or improvement of sidewalks and other pedestrian amenities by the State, consistent with these policies.

- The appropriate standards of the Rockville Pike Plan and the Town Center Urban Design Plan shall be followed in the sizing and buffering of sidewalks. Protective berms are to be especially encouraged as sidewalk buffers along Rockville Pike and Hungerford Drive, Rockville's busiest and most hazardous streets.

ATTACHMENT 10

The following table specifies the minimum specifications for the streets in and around the development:

Table 1: Minimum Widths

Zone / Block	Storefront Expansion	Pedestrian	Tree/Amenity/ Outdoor Café Seating	Buffer	Total	ROW
Beall Avenue bw. N. Washington and Maryland	2'	6'	7'	0	15'	Back of Curb
Beall Avenue bw. Maryland and MD 355	2'	8'	0	0	10'	Back of Curb
E. Middle bw. N. Washington and new street	0	6' (includes 1' overlap with Tree grate)	7 (includes 1' continuous, free of obstacles pedestrian area)	0	12	Back of Curb
E. Middle bw. New street and Maryland	0	6'	7'	0	13'	Back of Curb
E. Middle bw. Maryland and F.P.	2'	6'	7'	0	15'	Back of Curb
Maryland Ave (excluding portion adjacent to Library on west side of Maryland)	2'	9' (reduced to 6' at the n. end of Blk 4 at plaza, as shown on plan)	7'	2'	20' (17')	40' from back of curb to back of curb
Maryland Avenue adjacent to Library on west side of Maryland	As shown on plan	As shown on plan	As shown on plan	As shown on plan	As shown on plan	40' from back of curb to back of curb
New Street (west side)	2'	6'	7'	2'	17'	26' from back of curb to back of curb
New Street (east side)	2'	6'	7'	0	15'	26' from back of curb to back of curb
North Washington Street	2'	6'	7'	0	15'	Back of Curb

CREATING A VIBRANT CITY CENTER
BY CY PAUMIER
URBAN LAND INSTITUTE, 2004

CHAPTER 7

ATTACHMENT 11

Pedestrian Realm

To attract a diverse and concentrated mix of uses and foster economic interaction among these uses, the city center must encourage pedestrian movement through the central core. Consequently, a key element of revitalization planning is to establish an attractive system of pedestrian connections.

Planning of the city center pedestrian system begins with recognition of and improvements to the core area's central spine—the street where the greatest concentration of retail activity already exists and where new retail uses should be located. But a successful central area should have more than one pedestrian-oriented shopping street: needed is a system of pedestrian connectors linking major activity anchors to the spine and to one another.

System Components

The primary elements of the city center's pedestrian network should be on the street, sharing the rights-of-way with vehicular traffic. Developing on-street linkages is the most practical and cost-effective approach to creating this pedestrian network because it works within the framework already established by existing development patterns, maintains business visibility, and eliminates the need for street closures.

Morrison Street, Portland, Oregon.

112

Establishment of a high-quality pedestrian environment along the central spine of the city center contributes to its physical and economic regeneration. In Chicago, development of the streetscape and seasonal plantings on North Michigan Avenue has established a high-quality image for the retail and commercial businesses on the street.

Because most of the city center's pedestrian system consists of on-street components using shared rights-of-way, the system must be planned in coordination with the classification of streets as the spine, primary connectors, secondary connectors, and through-block connectors.

The Spine

In most cities, the central spine will accommodate both pedestrian and vehicular traffic; in certain circumstances, it also might be designed as a transitway or a pedestrian mall. In all cases, however, this spine should be readily identifiable as the city center's primary corridor by its concentration of retail activity and its streetscape treatment. It should constitute the central area's 100 percent retail location, stand out as the most richly designed component of the pedestrian system, portray the city's central image, and be the focus of activity.

Ideally, major anchors should be located at each end of the spine to maximize the volume of pedestrian use along its length and to create an attractive retail setting. In larger cities, such a spine might encompass a sequence of "anchor-to-anchor" settings. The central spine should include a balanced mix of retail, office, hotel, entertainment, and residential uses to ensure a cycle of activity that extends to

Outdoor cafés enrich and enliven pedestrian walkways in the city center. This street in Toronto, Canada, shows the ambience created when restaurants are permitted to use a portion of the walkway for outdoor dining. Most cities receive rental income for use of this valuable public space, providing funds that can be used to maintain and enhance the pedestrian realm.

113

evenings and weekends. In addition, the spine is the priority location for street vendors, cafés, outdoor performances and displays, and for special design components, including paving and streetscape elements, public art, and water features.

The central spine can be as vital in a small town as in the central area of a large city, with creation of a high-quality pedestrian environment stimulating private investment in the retail shops and storefronts in the community's town center.

Primary Connectors

The primary connectors are the streets that serve as major pathways for pedestrians. As the name implies, they provide the primary physical connections among the city center's activities and amenities and, through their streetscape treatment, create a clear visual structure for the central area. Like the spine, they should be designed to encourage pedestrian activity. Primary connectors, in turn, can be the amenity spines of subdistricts outside the core, providing a catalyst for private investment and new development.

Secondary Connectors

Secondary streets, the remaining streets within the city center core, usually are used as service arteries, transit corridors, and access roads leading to major parking areas. Although they are less important for pedestrian circulation than the spine or the primary connectors, their streetscape treatment should provide at least a minimum level of comfort for people on foot.

Through-Block Connectors

Through-block connectors are pedestrian pathways located at street level but off the street that provide shortcuts through development blocks. They function most effectively when they complement and reinforce the spine and primary connectors by running perpendicular to and providing links between them. Where the development pattern creates long blocks, through-block connectors can become especially important features of the pedestrian system by adding to the convenience of movement within the core. They can also function as linkages between parking and the major retail streets. Such through-block connectors add texture, richness, and diversity to the city center experience, and also can expand the potential for retail activity within the core by creating new retail frontage.

The historic arcade in Norfolk, Virginia, which provides a through-block link between two important streets in the city center, is used by many people to reach their destinations in the office district or on the waterfront. Most through-block connectors were designed as retail arcades, but the lack of adequate pedestrian traffic can make it difficult to sustain retail uses.

114

This pedestrian-oriented street in Dusseldorf, Germany, illustrates how simplicity and consistency in streetscape design contributes to a high-quality shopping experience (above). The streetscape elements, trees, benches, and flowers are usually located in the curbside planting zone so that the amenities do not distract from the visibility and appeal of the storefronts (below).

Design Considerations

The primary considerations in designing the components of the city center pedestrian system are use of the streetscape to create an attractive and comfortable setting for pedestrian activity, appropriate allocation of space to pedestrians and vehicles in shared rights-of-way, and creation of a positive relationship between the street and the development that defines its edge.

Streetscape

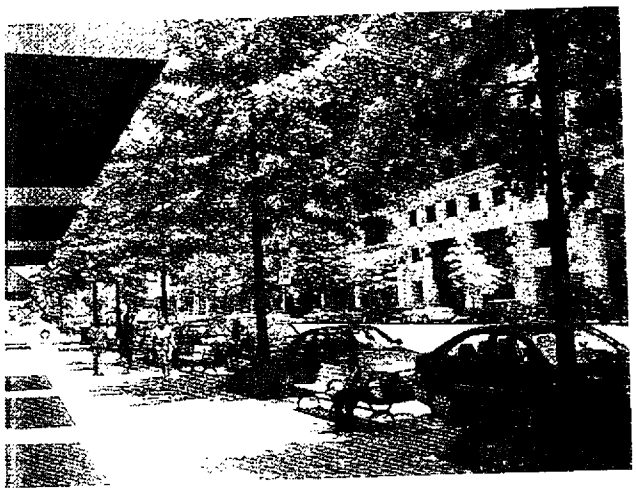
Streetscape treatment on the spine and primary connectors should create a unified image and defined visual structure for the city center, as well as an inviting and comfortable pedestrian environment. Simplicity and consistency are the keys to design success: simple design concepts executed with the highest-quality materials hold up best over time in terms of both maintenance and visual appeal.

The design of the streetscape should emphasize the linear continuity of the street space and enhance its potential for flexible use. The streetscape should establish an attractive foreground for businesses and a setting for other city center activity by creating an environment that is visually satisfying but that does not detract from the visibility and appeal of storefronts.

Walkway Width

A walkway pavement width of 20 feet (six meters) is desirable along the pedestrian spine and primary connectors. That width provides for both a 12-foot (3.7-meter) pedestrian zone adjacent to storefronts—to accommodate both window-shopping and through movement—and an eight-foot (2.4-meter) amenity zone adjacent to the curb. A walkway 20 feet (six meters) wide will allow seating, outdoor cafés, and public art to be incorporated into the streetscape without encroaching on the pedestrian zone. Streets used for mass transit require an amenity zone that is an additional ten to 15 feet (three to 4.6 meters) wide to accommodate queuing areas and shelters at the curb. Where the potential volume of pedestrian use is lower—i.e., secondary connectors or streets in smaller cities—walks that are more than 14 to 16 feet (4.3 to 4.9 meters) wide can dilute the sense of vitality and activity in the core.

115



Walkway Paving

The use of special paving on the spine and primary streets has a tremendous impact on the sense of amenity and visual richness. When used consistently, special paving also provides a visual connecting element that reinforces the pedestrian system. Although its initial installation cost is higher than for poured-in-place concrete, the durability and impact of special paving make it worth the expense. It is important not to lose sight of the first rule for all paving: it should be walkable in all weather for people of all ages in all types of footwear; uneven paving, shallow curbs, and steps can create safety hazards and discourage pedestrian activity.

A single special paving material should be selected for use throughout the pedestrian network. It can be used on the full width of the walk along the spine from storefront to curb, or in the curbside amenity zone as an accent to complement concrete walks on primary connectors. On all secondary connectors, plain concrete paving is recommended. Special paving also can be used to define pedestrian crosswalks to make them highly visible to motorists. In colder climates, special attention should be paid to whether snow removal equipment might damage modular paving in the crosswalks. The most successful pedestrian crossings are those used throughout Europe created with bold stripe patterns applied to the street paving to attract the attention of motorists.

Many cities have discovered the benefit of using concrete and clay pavers on city center walkways. In Washington, (above) developers are required to use two-by-three-foot (0.6-by-0.9-meter) paving blocks when replacing existing poured-in-place concrete. The scoring pattern and color used in the pavement on State Street in Chicago (left) is an environmental amenity that encourages pedestrian activity on this retail corridor.

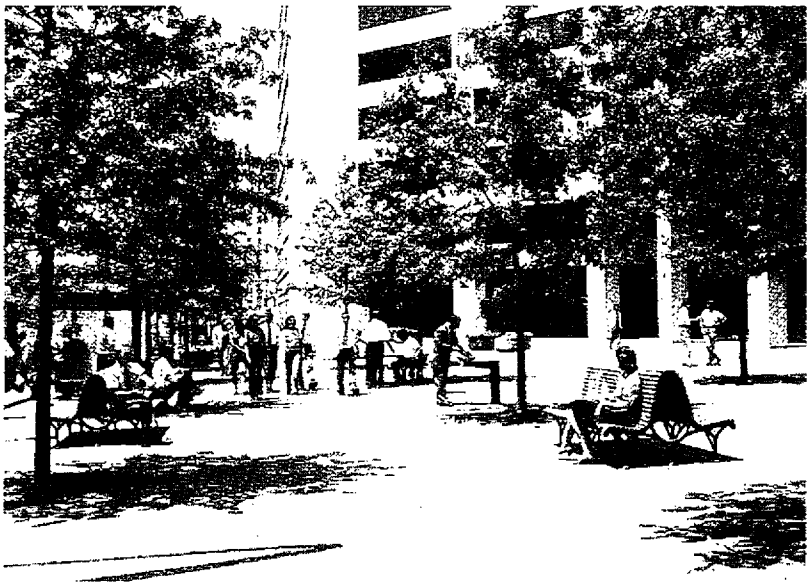
116

Wide setbacks along Pennsylvania Avenue in Washington provide space for a double row of street trees and sites for street vending and outdoor cafés (above). Parisian-style benches and colorful paving add to the richness of this ceremonial street (below).

Plantings

Canopy street tree plantings are one of the city center's most important streetscape features. They create a consistent, high-quality foreground for the motorist's perspective and establish a sense of separation between the street's traffic lanes and the pedestrian zone. In addition, street trees provide shade, create a human scale that tempers the large buildings, and enhance pedestrian comfort without obscuring the visibility of storefronts.

Although raised planters have been used extensively to increase the sense of separation between the walkway and the adjacent street, they limit the amount of space for pedestrians and the potential for multiple uses for the curbside amenity zone. In addition, they can give pedestrians the sense that the street is cluttered and add to streetscape construction and maintenance costs. For these reasons, their use is not recommended unless they provide the only way to create planting areas over subsurface vaults or utility lines. If colorful floral accents are desired as part of the streetscape, movable planters can be provided at intervals within the curbside zone, but it is essential that an adequate annual budget be provided for seasonal planting and maintenance.



Street Furniture

The use of well-designed furniture throughout the central area helps to establish a unifying theme. Regeneration planning must incorporate criteria for the selection and use of streetlights, seating, trash receptacles, newspaper vending machines, movable planters, transit shelters, tree grates, and vendor carts. These criteria also should guide the design and location of regulatory and directional signs to minimize their visual impact and enhance legibility. Also needed are criteria that set standards for the use and location of public art, such as sculptures, murals, and banners.

Pedestrian-scale lighting, employing 12-foot-high (3.7-meter-high) light standards, should be used wherever possible to establish a high-quality amenity along pedestrian streets. These lower, human-scale lights can be used between intersections lit by standard-height street-

lights to provide a uniform illumination level that increases security without creating harsh light or glare.

While ample, well-designed seating is important in order to increase the level of pedestrian comfort, the curbside is not always the best location for it. Except for bus stops and outdoor cafés, areas adjacent to the walkway but set back from the street are more appealing sites for seating than the curbside amenity zone. As part of the design of buildings, plazas, and parks, seating opportunities can be provided using ledges, steps, low walls, movable tables and chairs, and conventional benches.

Streetside seating can best be accommodated where the pedestrian amenity zone allows sufficient space for benches arranged perpendicular to the roadway. This arrangement provides opportunities for people-watching; benches facing away from the pedestrian zone and toward the street are only useful for transit patrons. Simply designed wood or steel benches that combine comfort and durability should be selected. If the funding is not available to purchase the highest-quality benches, it is probably best not to use them on the street at all.

Dedicated Pedestrian Streets

In the 1960s, many architects and planners believed that complete separation of pedestrian and vehicular movement would create the most attractive environment for people and best serve the city center retailers. Cities in the United Kingdom, continental Europe, and Australia developed dedicated pedestrian streets to serve their expanding city center retail markets. In North America, the pedestrian mall was introduced to help save declining retail districts that were being outperformed by the suburban malls, which offered pedestrian amenities and free parking.

The narrow pedestrian streets in York, England, (left) are inviting due to the scale of the space, the presence of retail shops, and the high quality of the historic buildings. In Bayreuth, Germany, (right) the wide rights-of-way provide space for produce markets, street vendors, and outdoor cafés. The activities and programmed events that take place in these dedicated pedestrian streets are critical to their success.

The Third Street Promenade in Santa Monica, California, was designed to emphasize the qualities of a traditional street, a sense of human scale, and the linear continuity of the public right-of-way. Thousands of people from the Los Angeles area are attracted to this high-quality pedestrian street that provides residents and visitors with an interesting mix of retail and entertainment choices.

But subsequent studies of how people use urban spaces show that the exclusion of vehicular traffic or the separation of vehicular and pedestrian systems is not necessary or even desirable. Indeed, removing all vehicular traffic from selected streets or giving the street over to vehicles and creating a separate system of skywalks for pedestrian movement can be counterproductive.

Closing the city center's retail spine to vehicles and converting it to a pedestrian street was an inadequate response to the broader economic problem of how to strengthen the center's retail uses. The effort often failed not because the idea of enhancing the central area's identity as a place for people was misguided, but because the basic concept ignored a number of fundamental requirements for city center retail regeneration. These requirements include:

- ❖ new activity generators to draw more people to the central area, establishing a new base of market support;
- ❖ a merchandising mix that is more competitive with suburban centers;
- ❖ links among all the city center's major generators to foster market synergy among uses; and
- ❖ street access and visibility, which are eliminated when a mall is created.

Although the pedestrian mall concept attracted shoppers, it failed to keep them coming back because its land use and retail mix were weak. Many pedestrian streets also failed largely because their design—especially in the earlier years—ignored the special character of the urban street. Instead of emphasizing the traditional street's architecture, sense of human scale, spatial enclosure, and linear continuity, the design of the pedestrian street often took the elements that characterized the public spaces of the suburban shopping center—berms, informal planting areas, raised planters, fixed seating, fountains, and play sculptures—and used them to fill the street space.

Often, the scale of the pedestrian space created by closing the street to vehicles presented a problem. Compared with a traditional shopping area, the pedestrian street, when vehicles were excluded, seemed to be out of scale with the volume of pedestrians, leaving it looking empty rather than lively and bustling with activity. Many pedestrian streets also failed on a more detailed design level because they used paving materials, street furniture, and planting approaches that impaired the space's flexibility for use for a variety of functions, created a sense of visual clutter, and ignored the goals of durability and maintainability.

119

The application of suburban design concepts to city center spaces was destined to fail because it did not recognize the essential characteristics that make the urban street an attractive and social space. Most U.S. cities removed their pedestrian malls when public officials and property owners realized the need for accessibility and visibility. This failure carries two important lessons for designers of the city center's pedestrian system:

- It is dangerous to import imitative solutions unless the basic conditions that contributed to their original success are clearly present in the city center.
- The special characteristics and resources of the city center can enhance its identity, its sense of place, and its competitiveness without such imports.

Skywalk Systems

In the 1970s, a popular strategy to reduce conflicts between vehicular and pedestrian circulation in congested city centers was the grade-separated skywalk system. This proposed solution did not involve limiting traffic on certain streets to give the pedestrian priority, but rather luring most of the pedestrians off the street onto elevated skyways connecting the upper levels of the buildings. Grade-separated systems—which can also come in the form of tunnels—do offer some benefits that may be difficult to achieve by other means, including provision of pedestrian safety, as well as creation of climate-controlled walkway connections, of particular value in northern cities during the winter. But the serious disadvantages of such systems usually far outweigh these

This pedestrian bridge in San Francisco was designed to look like and have the feel of a traditional street. The introduction of café tables and chairs and colorful planters on the walkway adds to the positive experience of crossing between two second-level pedestrian plazas. In favorable climates, pedestrian bridges do not have to be enclosed.

Most pedestrian bridges have been constructed to provide climate-controlled walkways between office and retail development and related parking. In Cedar Rapids, Iowa, (right) and Minneapolis, Minnesota, (below) the second-level walkways are part of a city center skyway system. These interconnected walkways are widely used in northern U.S. cities, but they have hurt street-level retail business.

virtues. Among the disadvantages are the following:

- Development of a grade-separated system almost always depends on the willingness of private property owners to provide public corridors between or within their buildings and to help fund their construction. This frequently means that key connections are not developed in a timely manner and that public access is limited to particular segments.

- Significant problems can arise involving access to the skyway system from street level, the visibility of entrance points, and connections between buildings with different elevations. Without suitable access, use of the entire system will be limited. Also, escalators or elevators must be provided to assist in making vertical connections. A number of cities have eliminated their skywalks because of the high cost of operating and maintaining the mechanical systems associated with the escalators and elevators.

- It is extremely difficult to maintain the architectural integrity of older buildings when skywalks are added. Skywalk bridges also block traditional view corridors along the streets, diminish the perception of connections between subdistricts and anchors, and weaken the overall visual integrity of the city center's urban personality.

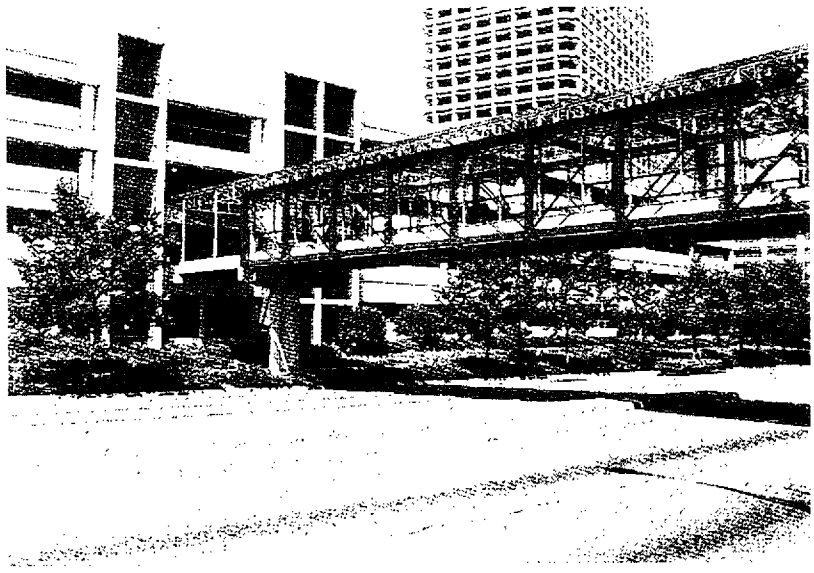
- Skyway systems can present security problems. Segments may not be visible from the street and they often lack active storefront uses, making them difficult to patrol and making it hard for pedestrians to gauge their own safety. If the level of security is perceived to be low, people will not use the system.

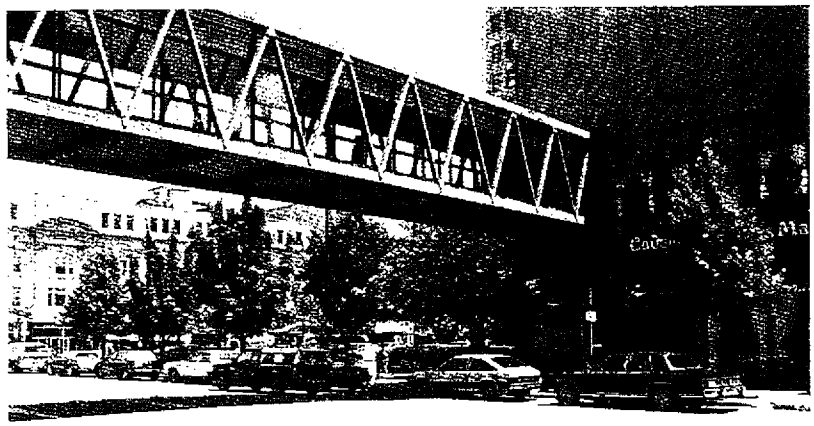
(121)

- The most powerful argument against development of grade-separated pedestrian systems: they sap vitality from the street-level environment. Skywalk and underground systems tend to siphon retail and pedestrian activity from the street, isolating and ignoring the features that have the greatest potential to give the city center a lively atmosphere and sense of vitality.

Unless the intensity of pedestrian use and the potential support of retail expansion are especially strong, it is difficult or impossible to merchandise fully both at the street level and the skyway or underground level. Grade-separated systems ultimately can undermine the goal of creating a better street-level environment. Cities that already have lower intensities of street activity are especially vulnerable. Even in larger cities, the volume of pedestrian use needed to support continuous activity both on the street and within the grade-separated systems is usually found only in a small part of the city center.

Instead of separating pedestrian and vehicular flows through the use of skywalks or tunnels, city center planning should establish an appropriate balance between pedestrians and vehicles in the corridors they share. This means giving priority to the pedestrian on the spine and the primary connectors while providing a minimum number of pedestrian amenities on all other streets within the city center.





View corridors along important image streets can be impaired by construction of a major pedestrian bridge over a street right-of-way. The bridge in Norfolk (top) and the elevated walkway in Cedar Rapids (above) cross over important image streets that motorists use to enter the city center.

122

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Dining Al Fresco Expected to Energize King Street

By Leef Smith
Washington Post Staff Writer
Thursday, October 7, 2004; Page VA03

Alexandria city planners were so pleased with the response to the outdoor dining offered during last month's Fall Festival in Old Town that they have decided to start a pilot program to allow expanded outdoors eating opportunities along King Street.

The program, which received unanimous City Council approval last week, would cut the administrative red tape that restaurant owners must navigate to provide outdoor seating at their establishments.

The pilot program takes effect immediately and will run through the end of the year. It is open to restaurants on King Street between the waterfront and the King Street Metro Station and to those on the blocks nearest the intersecting streets.

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Officials say there are about 75 restaurants in the geographic area covered by the pilot program, although they cannot say how many of those will be disqualified because they do not meet the plan's sidewalk space requirements.

The trade-off for the benefits of offering outdoor seating, officials say, probably will be some sidewalk congestion during the peak tourist seasons when Old Town's streets bustle with visitors.

123

"Many cities have found the benefits of outdoor eating," said Tom Fairchild, a business facilitator for the city who has been helping coordinate the pilot project.

"It's like everything else in life," Fairchild said. "There are trade-offs. Outdoor eating for restaurants adds a level of vibrancy and dynamism that makes the trade-off worthwhile."

The idea for the pilot program grew out of the success of special outdoor seating during last month's arts festival and the notion that outdoor dining is a key ingredient in helping city restaurants remain competitive with area eateries.

The King Street retail advisory committee has been meeting throughout the year to identify strategies to strengthen the retail appeal and vibrancy of King Street. Outdoor dining was one of the ideas that surfaced during committee workshops.

Ralph Davis, owner of two King Street restaurants, the Wharf and Warehouse Bar & Grill, was outside last week, yellow tape measure in hand, measuring his sidewalks.

He has about 16 feet of sidewalk to work with, and that will accommodate about 15 additional seats, he said. Davis said that the net financial gain of the added tables will be small but that the gain for Old Town will be huge.

"It's going to make it more inviting and interesting," Davis said. He said that Old Town doesn't have the cachet that it once did, because local restaurateurs are competing with newer eateries throughout Northern Virginia, many of them upscale. Outdoor seating, he said, will draw new patrons and make Old Town more appealing and competitive.

Davis said that city planners haven't historically been so helpful to local businesses but that now they are doing "whatever they can" to help businesses lure shoppers and diners.

During the pilot program, city officials will try to identify potential problems, solicit input from the public and determine whether and how the program could be implemented on a long-term basis and perhaps expanded to other parts of the city.

Previously, a restaurant that wanted to offer outdoor seating in an area that encroached on a public right of way had to apply for a permit from the City Council. Under the terms of the pilot, restaurants within the identified zone will go through a simple, no-cost administrative approval process.

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124

Restaurants interested in participating will have to show, among other things, that there is adequate space on the sidewalk beyond the seating area to allow the free passage of pedestrians. The outdoor seating plan must leave a usable sidewalk area, free of any obstructions, that is at least five feet wide at all points adjacent to the outdoor seating area.

"The hope is that it'll be a big success, and come the beginning of next year, the City Council will take action to make it a permanent program" and expand its scope, Fairchild said. "It'll give energy to King Street that wasn't there before."

(125)